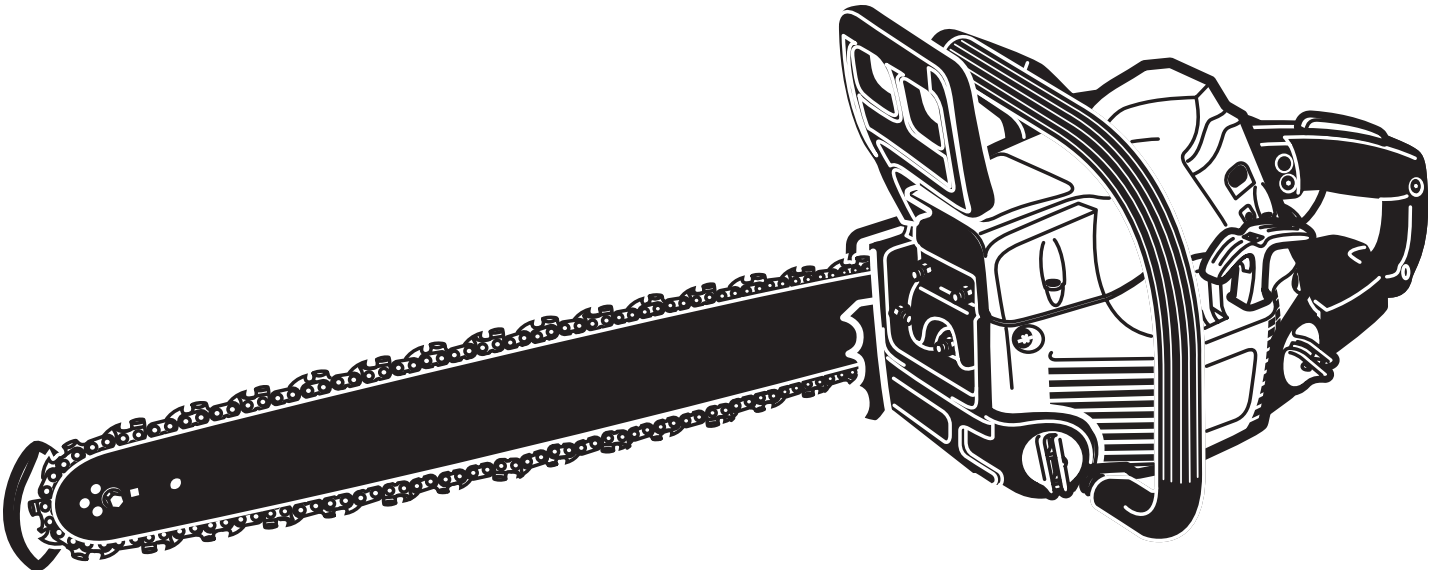
Homelite®

OPERATOR'S MANUAL

UT10517/18 in. 42cc Chain Saw
UT10518/18 in. 46cc Chain Saw
UT10520/20 in. 46cc Chain Saw



Your chain saw has been engineered and manufactured to Homelite's high standard for dependability, ease of operation, and operator safety. When properly cared for, it will give you years of rugged, trouble-free performance.

⚠ **WARNING:** To reduce the risk of injury, the user must read and understand the operator's manual before using this product.

Thank you for buying a Homelite product.

SAVE THIS MANUAL FOR FUTURE REFERENCE

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INTRODUCTION

This product has many features for making its use more pleasant and enjoyable. Safety, performance, and dependability have been given top priority in the design of this product making it easy to maintain and operate.

GENERAL SAFETY RULES

⚠ WARNING:

Read and understand all instructions. Failure to follow all instructions listed below, may result in electric shock, fire and/or serious personal injury.

READ ALL INSTRUCTIONS

- **Know your tool.** Read the operator's manual carefully. Learn the saw's applications and limitations as well as the specific potential hazards related to this tool.
- **Kickback may occur when the nose or tip of the guide bar touches an object**, or when the wood closes in and pinches the saw chain in the cut. Tip contact in some cases may cause a lightning-fast reverse reaction, kicking the guide bar up and back toward the operator. Pinching the saw chain along the top of the guide bar may push the guide bar rapidly back toward the operator. Either of these reactions may cause you to lose control of the saw, which could result in serious personal injury. Do not rely exclusively upon the safety devices built into the saw. As a chain saw user, you should take several steps to keep your cutting jobs free from accident or injury.
  - With a basic understanding of kickback, you can reduce or eliminate the element of surprise. Sudden surprise contributes to accidents.
  - Keep a good firm grip on the saw with both hands when the engine is running. Place your right hand on the rear handle and your left hand on the front handle with your thumbs and fingers encircling the chain saw handles. A firm grip together with a stiff left arm will help you maintain control of the saw if kickback occurs.
  - Make sure that the area in which you are cutting is free from obstructions. DO NOT let the nose of the guide bar contact a log, branch, fence, or any other obstruction that could be hit while you are operating the saw.
  - Cut at high engine speeds. Always cut with the engine running at full speed. Fully squeeze the throttle trigger and maintain a steady cutting speed.
  - Do not overreach or cut above chest height.
  - Follow the manufacturer's sharpening and maintenance instructions for the saw chain.
  - Only use replacement bars and chains specified by the manufacturer or the equivalent.
- **Do not operate a chain saw with one hand.** Serious injury to the operator, helpers, bystanders, or any combination of these persons may result from one-handed operation. A chain saw is intended for two-handed use.
- **Do not operate a chain saw when you are fatigued.** Fatigue causes carelessness. Be more cautious before rest periods and towards the end of your shift. Never operate a chain saw when you are tired or under the influence of medication, drugs, or alcohol.
- **Use safety footwear.** Wear snug-fitting clothing, protective gloves, and eye, hearing, and head protection devices.
- **Heavy protective clothing may increase operator fatigue, which could lead to heat stroke.** During weather that is hot and humid, heavy work should be scheduled for early morning or late afternoon hours when temperatures are cooler.
- **Do not stand on any unstable surface** while using the chain saw, that includes ladders, scaffolds, trees, etc.
- **Use caution when handling fuel.** Move the chain saw at least 30 feet from the fueling point before starting the engine.
- **Do not allow other persons to be near the chain saw when starting or cutting with the chain saw.** Keep bystanders and animals out of the work area.
- **Do not start cutting until you have a clear work area**, secure footing, and a planned retreat path from the falling tree.
- **Keep all parts of your body away from the saw chain** when the engine is running.
- **Always carry the chain saw with the engine stopped and the brake engaged**, the guide bar and saw chain to the rear, and the muffler away from your body. When transporting the chain saw, use the appropriate guide bar scabbard.
- **Do not operate a chain saw that is damaged,** improperly adjusted, or not completely and securely assembled. Be sure that the saw chain stops moving when the throttle control trigger is released.
- **Shut off the engine before setting the chain saw down.** Do not leave the engine running unattended. As an additional safety precaution, apply the chain brake prior to setting down the saw.
- **Use extreme caution when cutting small-size brush and saplings** because slender material may catch the saw chain and be whipped toward you or pull you off balance.
- **When cutting a limb that is under tension**, be alert for springback so that you will not be struck when the tension in the wood fibers is released.
- **Keep the handles dry**, clean, and free of oil or fuel mixture.
- **Beware of carbon monoxide poisoning.** Operate the chain saw only in well-ventilated areas.
- **Do not operate a chain saw in a tree** unless you have been specifically trained to do so.
- **Do not cut from a ladder;** this is extremely dangerous.
- **All chain saw service**, other than the items listed in the instruction manual and all maintenance, should be performed by competent chain saw service personnel. (For example, if improper tools are used to remove the flywheel or if an improper tool is used to hold the flywheel in order to remove the clutch, structural damage to the flywheel could occur and subsequently could cause the flywheel to burst.)
- **Always have a fire extinguisher available** when using chain saw.

GENERAL SAFETY RULES

- **Use only the replacement guide bars and low kickback chains** specified for the saw.
- **Do not adapt the powerhead to a bow guide** or use it to power any attachments or devices not listed for the saw.
- **The gas powered saw (or electrically powered saw) is classified by CSA as a Class 1C (or Class 2C) saw.** It is intended for infrequent use by homeowners, cottagers, and campers, and for such general applications as clearing, pruning, cutting firewood, etc. It is not intended for prolonged use. Prolonged periods of operation can cause circulatory problems in the user's hands due to vibration. For such use, it may be appropriate to use a saw having an anti-vibration feature.
- **Save these instructions.** Refer to them frequently and use to instruct other users. If you loan someone this tool, loan them these instructions also.

SPECIFIC SAFETY RULES

⚠ WARNING:

The warnings, labels, and instructions found in this section of the operator's manual are for your safety. Failure to follow all instructions may result in serious personal injury.

- **Do not cut vines** and/or small underbrush (a diameter of less than 3 in.).
- **Muffler surfaces are very hot during and after operation of the chain saw;** keep all body parts away from the muffler. Serious burns may occur if contact is made with the muffler.
- **Always hold the chain saw with both hands when the engine is running.** Use a firm grip with thumbs and fingers encircling the chain saw handles.
- **Never let anyone use the chain saw who has not received adequate instructions in its proper use.** This applies to rentals as well as privately owned saws.
- **Before you start the engine**, make sure the saw chain is not contacting any object.
- **Wear snug-fitting clothing.** Always wear heavy, long pants, boots, and gloves. Do not wear jewelry, short pants, sandals, or go barefoot. Do not wear loose fitting clothing, which could be drawn into the engine or catch the chain or underbrush. Wear overalls, jeans, or chaps made of cut-resistant material or ones that contain cut-resistant inserts. Secure hair so that it is above shoulder level.
- **Wear non-slip safety footwear and heavy-duty gloves** to improve your grip and to protect your hands.
- **Wear eye protection which is marked to comply with ANSI Z87.1, as well as hearing and head protection**, when operating this equipment.
- **Keep bystanders and animals out of the work area.** Do not allow other persons to be nearby during starting or cutting with the chain saw.

  NOTE: The size of the work area depends on the job being performed as well as the size tree or workpiece involved. For example, felling a tree requires a larger work area than making other cuts (i.e., bucking cuts, etc.).
- **Keep SAFE-T-TIP anti-kickback nose guard properly mounted on the guide bar** to prevent rotational kickback.
- **Follow the sharpening and maintenance instructions** for the saw chain.
- **Never operate a chain saw that is damaged, improperly adjusted, or is not completely and securely assembled.** Be sure that the saw chain stops moving when the throttle control trigger is released. If the saw chain moves at idle speed, the carburetor may need adjusting. Refer to **Adjusting the Carburetor** in the *Maintenance* section of this manual. If the saw chain still moves at idle speed after adjustment has been made, contact an authorized service center for adjustment and discontinue use until the repair is made.

REFUELING (DO NOT SMOKE!)

- **To reduce the risk of fire and burn injury**, handle fuel with care. It is highly flammable.
- **Mix and store fuel** in a container approved for gasoline.
- **Mix fuel outdoors** where there are no sparks or flames.
- **Select bare ground, stop the engine, and allow it to cool** before refueling.
- **Loosen the fuel cap slowly** to release pressure and to keep fuel from escaping around the cap.
- **Tighten the fuel cap securely** after refueling.
- **Wipe spilled fuel from the unit.** Move 30 feet away from refueling site before starting engine.
- **Never attempt to burn off spilled fuel** under any circumstances.

KICKBACK

- **Kickback is a dangerous reaction that can lead to serious injury.** Do not rely only on the safety devices provided with the saw. As a chain saw user, you must take special safety precautions to help keep your cutting jobs free from accident or injury. See the *General Safety Rules* and *Operation* sections of this manual for added information on kickback and how to avoid serious personal injury.

SYMBOLS

Some of the following symbols may be used on this product. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the product better and safer.

SYMBOL	NAME	DESIGNATION/EXPLANATION
	Safety Alert	Precautions that involve your safety.
	Read The Operator's Manual	To reduce the risk of injury, user must read and understand operator's manual before using this product.
	Wear Eye, Hearing, and Head Protection	Wear eye protection which is marked to comply with ANSI Z87.1 as well as hearing and head protection when operating this equipment.
	SAFE-T-TIP Nose Guard	The SAFE-T-TIP nose guard on the guide bar helps prevent kickback.
	No Smoking	No smoking, sparks, or open flame.
	Operate With Two Hands	Hold and operate the saw properly with both hands.
	One Handed	Do not operate the saw using only one hand.
	Carbon Monoxide	Engines produce carbon monoxide which is an odorless, deadly poison. Do not operate in an enclosed area.
	Kickback	DANGER! Beware of kickback.
	Bar Nose Contact	Avoid bar nose contact.
	Wear Gloves	Wear non-slip, heavy-duty protective gloves when handling the chain saw.
	Gasoline and Oil	Use unleaded gasoline intended for motor vehicle use with an octane rating of 87 [(R + M)/2] or higher. This product is powered by a 2-cycle engine and requires pre-mixing gasoline and 2-cycle oil.
	Keep Bystanders Away	Keep all bystanders and animals at least 50 ft. away.

SYMBOLS

The following signal words and meanings are intended to explain the levels of risk associated with this product.

SYMBOL	SIGNAL	MEANING
⚠	**DANGER:**	Indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.
⚠	**WARNING:**	Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.
⚠	**CAUTION:**	Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.
	CAUTION:	(Without Safety Alert Symbol) Indicates a situation that may result in property damage.

SERVICE

Servicing requires extreme care and knowledge and should be performed only by a qualified service technician. For service we suggest you return the product to your nearest **AUTHORIZED SERVICE CENTER** for repair. When servicing, use only identical replacement parts.

⚠ WARNING:

To avoid serious personal injury, do not attempt to use this product until you read thoroughly and understand completely the operator's manual. If you do not understand the warnings and instructions in the operator's manual, do not use this product. Call Homelite customer service for assistance.

⚠ WARNING:

The operation of any power tool can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power tool operation, always wear safety goggles, safety glasses with side shields, or a full face shield when needed. We recommend Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with side shields. Always use eye protection which is marked to comply with ANSI Z87.1.

SAVE THESE INSTRUCTIONS

GLOSSARY OF TERMS

Bucking
The process of cross cutting a felled tree or log into lengths.

Chain Brake
A device used to stop the saw chain.

Chain Saw Powerhead
A chain saw without the saw chain and guide bar.

Clutch
A mechanism for connecting and disconnecting a driven member to and from a rotating source of power.

Drive Sprocket or Sprocket
The toothed part that drives the saw chain.

Felling
The process of cutting down a tree.

Felling Back Cut
The final cut in a tree felling operation made on the opposite side of the tree from the notching undercut.

Front Hand Guard
A structural barrier between the front handle of a chain saw and the guide bar, typically located close to the hand position on the front handle, and sometimes employed as an activating lever for a chain brake.

Front Handle
The support handle located at or toward the front of the chain saw. This handle is for the left hand.

Guide Bar
A solid railed structure that supports and guides the saw chain.

Kickback
The backward or upward motion, or both, of the guide bar occurring when the saw chain near the nose of the top area of the guide bar contacts any object such as a log or branch, or when the wood closes in and pinches the saw chain in the cut.

Kickback (Pinch)
The rapid pushback of the saw which can occur when the wood closes in and pinches the moving saw chain in the cut along the top of the guide bar.

Kickback (Rotational)
The rapid upward and backward motion of the saw which can occur when the moving saw chain near the upper portion of the tip of the guide bar contacts an object, such as a log or branch.

Low-Kickback Chain
A chain that complies with the kickback performance requirements of ANSI B175.1 when tested on a representative sample of chain saws.

Normal Cutting Position
Those positions assumed in performing the bucking and felling cuts.

Notching Undercut
A notch cut in a tree that directs the tree's fall.

Rear Handle
The support handle located at or toward the rear of the saw. It normally contains the throttle. This handle is for the right hand.

Reduced Kickback Guide Bar
A guide bar which has been demonstrated to reduce kickback significantly.

Replacement Saw Chain
A chain that complies with the kickback performance requirements of ANSI B175.1 when tested with specific chain saws. It may not meet the ANSI performance requirements when used with other saws.

SAFE-T-TIP Nose Guard
An attachment that may be provided on the end of the guide bar to prevent the chain at the end of the guide bar from contacting the wood.

Saw Chain
A loop of chain having cutting teeth that cut the wood, and that is driven by the motor and is supported by the guide bar.

Springpole
A small tree (sapling) or limb that is bent or trapped under tension. It may "spring back" rapidly when cut, causing a dangerous situation.

FEATURES

PRODUCT SPECIFICATIONS

Bar length:
- UT10517, UT10518.....18 in.
- UT10520 .....20 in.

Chain pitch:
- UT10517 ..... .375 in.
- UT10518, UT10520..... .325 in.

Chain type:
- UT10517 ..... Low Profile Skip Tooth
- UT10518, UT10520.....Standard

Engine displacement 46cc
Chain gauge ..... .050 in.
Drive sprocket 10-tooth
Engine power .....2.5 HP min.
Idle engine speed .....2,600-3,400 r/min. (RPM)
Fuel tank capacity .....19.4 oz.
Chain oil tank capacity .....11.8 oz.
Weight - No bar, chain, fuel or oil .....10 lbs.

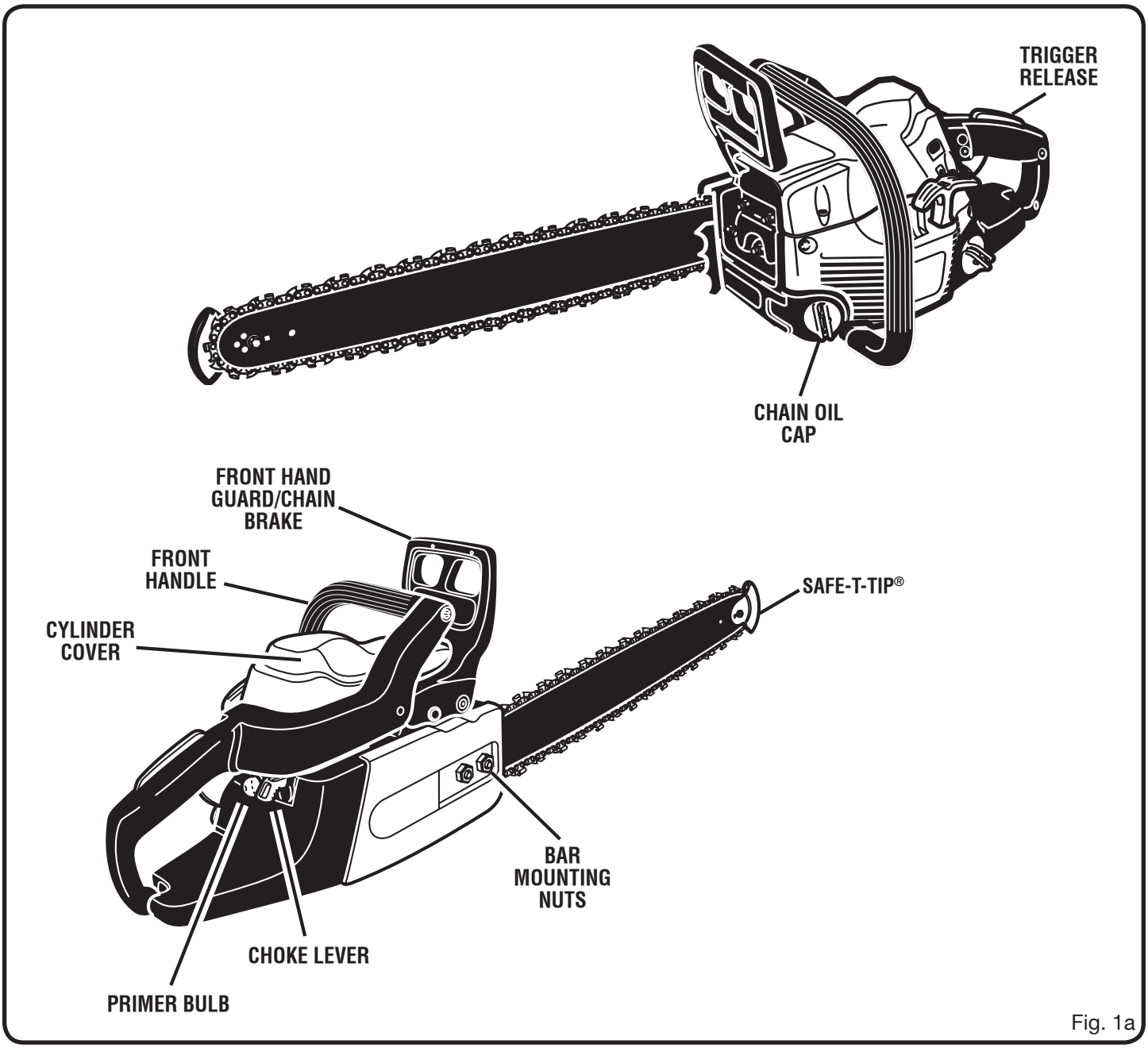


Fig. 1a

FEATURES

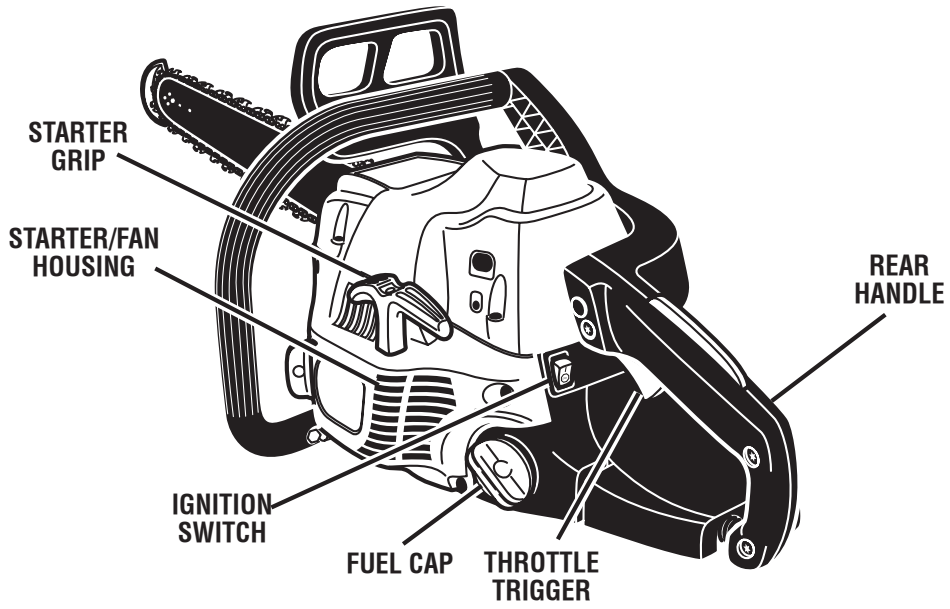


Fig. 1b

KNOW YOUR CHAIN SAW

See Figures 1a - 1b.

The safe use of this product requires an understanding of the information on the tool and in this operator's manual as well as a knowledge of the project you are attempting. Before use of this product, familiarize yourself with all operating features and safety rules.

CHOKE LEVER

The choke lever opens and closes the choke valve in the carburetor. Positions available include FULL CHOKE, HALF CHOKE, and RUN.

FRONT HAND GUARD / CHAIN BRAKE

The chain brake is designed to quickly stop the chain from rotating. When the front hand guard/chain brake is pushed toward the bar, the chain should stop immediately. The chain brake does not prevent kickback.

GUIDE BAR

The factory-equipped guide bar has a small radius tip that offers a somewhat lower kickback potential.

LOW KICKBACK SAW CHAIN

The low kickback saw chain helps minimize the force of a kickback reaction by preventing the cutters from digging in too deeply at the kickback zone.

PRIMER BULB

The primer bulb pumps fuel from the fuel tank to the carburetor.

SAFE-T-TIP ANTI-KICKBACK NOSE GUARD

The SAFE-T-TIP Anti-Kickback Nose Guard is an attachment provided on the end of the guide bar to prevent the chain on the end of the guide bar from contacting the wood.

THROTTLE TRIGGER

The throttle trigger is used for starting the chain saw, and also for controlling chain rotation.

ASSEMBLY

UNPACKING

This product has been shipped completely assembled.

- Carefully remove the tool and any accessories from the box. Make sure that all items listed in the packing list are included.
- Inspect the tool carefully to make sure no breakage or damage occurred during shipping.
- Do not discard the packing material until you have carefully inspected and satisfactorily operated the tool.
- If any parts are damaged or missing, please call 1-800-242-4672 for assistance.

PACKING LIST

Chain Saw

Scabbard

Combination Wrench

2-Cycle Engine Lubricant

Case

Operator's Manual

⚠ WARNING:

If any parts are damaged or missing do not operate this product until the parts are replaced. Failure to heed this warning could result in serious personal injury.

⚠ WARNING:

Do not attempt to modify this product or create accessories not recommended for use with this product. Any such alteration or modification is misuse and could result in a hazardous condition leading to possible serious personal injury.

NOTE: The chain saw has been fully factory tested. It is normal to find some slight oil residue on the saw. Read and remove all hang tags and store with the Operator's Manual.

OPERATION

⚠ WARNING:

Do not allow familiarity with this product to make you careless. Remember that a careless fraction of a second is sufficient to inflict serious injury.

⚠ WARNING:

Always wear safety goggles or safety glasses with side shields when operating power tools. Failure to do so could result in objects being thrown into your eyes resulting in possible serious injury.

⚠ WARNING:

Do not use any attachments or accessories not recommended by the manufacturer of this product. The use of attachments or accessories not recommended can result in serious personal injury.

APPLICATIONS

You may use this product for the purposes listed below:

- Basic limbing, felling, and woodcutting
- Removing buttress roots

⚠ WARNING:

Always shut off engine before fueling. Never add fuel to a machine with a running or hot engine. Move at least 30 ft. from refueling site before starting the engine. DO NOT SMOKE! Failure to heed this warning could result in serious personal injury.

FUEL AND REFUELING

HANDLING THE FUEL SAFELY

⚠ WARNING:

Check for fuel leaks. If any are found, correct them before using the saw to prevent fire or burn injury.

- Always handle fuel with care; it is highly flammable.
- Always refuel outdoors and do not inhale fuel vapors.
- Do not let gasoline or oil come in contact with skin.
- Keep gasoline and oil away from the eyes. If gasoline or oil comes in contact with the eyes, wash them immediately with clean water. If irritation is still present, see a doctor immediately.
- Clean up spilled fuel immediately.

Refer to **Refueling** in the *Specific Safety Rules* section of this manual for additional safety information.

MIXING THE FUEL

- This product is powered by a 2-cycle engine and requires pre-mixing gasoline and 2-cycle oil. Pre-mix unleaded gasoline and 2-cycle engine oil in a clean container approved for gasoline.
- This engine is certified to operate on unleaded gasoline intended for automotive use with an octane rating of 87 [(R + M) / 2] or higher.
- Do not use any type of pre-mixed gasoline/oil from fuel service stations, this includes the pre-mixed gasoline/oil intended for use in mopeds, motorcycles, etc.
- Use a high quality 2-cycle self-mixing oil for air-cooled engines. Do not use automotive oil or 2-cycle outboard oil.
- Mix 2% oil into the gasoline. This is a 50:1 ratio.
- Mix the fuel thoroughly and each time before fueling.
- Mix in small quantities. Do not mix quantities larger than usable in a 30-day period. A 2-cycle oil containing a fuel stabilizer is recommended.

PREMIUM EXACT MIX™ (50:1)

GASOLINE	OIL
1 Gallon (US)	2.6 oz.
1 Liter	20 cc (20 ml)

OXYGENATED FUELS

Some conventional gasolines are blended with alcohol or an ether compound. These gasolines are collectively referred to as oxygenated fuels. To meet clean air standards, some areas of the United States and Canada use oxygenated fuels to help reduce emissions.

If using an oxygenated fuel, make sure it is unleaded and meets the minimum octane rating requirements. Before using an oxygenated fuel, try to confirm the fuel's contents. Some states/provinces require this information to be posted on the pump. The following are the EPA approved percentages of oxygenates:

Ethanol (ethyl or grain alcohol) 10% by volume. You may use gasoline containing up to 10% ethanol by volume. Gasoline containing ethanol may be marketed under the name "Gasohol." Do not use E85 fuel.

MTBE (methyl tertiary butyl ether) 15% by volume. You may use gasoline containing up to 15% MTBE by volume.

Methanol (methyl or wood alcohol) 5% by volume. You may use gasoline containing up to 5% methanol by volume as long as it also contains cosolvents and corrosion inhibitors to protect the fuel system. Gasoline containing more than 5% methanol by volume may cause starting and/or performance problems. It may also damage metal, rubber, and plastic parts of the product or your fuel system.

If you notice any undesirable operating symptoms, try another service station or switch to another brand of gasoline.

NOTE: Fuel system damage or performance problems resulting from the use of an oxygenated fuel containing more than the percentages of oxygenates stated previously are not covered under warranty.

OPERATION

FILLING THE FUEL TANK

See Figure 2.

- Clean the surface around the fuel cap to prevent contamination.
- Loosen the fuel cap slowly.
- Carefully pour the fuel mixture into the tank. Avoid spillage.
- Prior to replacing the fuel cap, clean and inspect the o-ring.
- Immediately replace the fuel cap and hand tighten. Wipe up any fuel spillage.

NOTE: It is normal for the engine to emit smoke during and after the first use.

ADDING BAR AND CHAIN OIL

See Figure 3.

Use HOMELITE Bar and Chain Oil. It is designed for chains and chain oilers, and is formulated to perform over a wide temperature range with no dilution required. Chain saw should use approximately one tank of oil per tank of fuel.

NOTE: Do not use dirty, used, or otherwise contaminated oils. Damage may occur to the oil pump, bar, or chain.

- Carefully pour the bar and chain oil into the oil tank.
- Fill the oil tank every time you fuel the engine.

OPERATING THE CHAIN BRAKE

See Figures 4 - 5.

Check the operating condition of the chain brake prior to each use.

- Using the back of your left hand, engage the chain brake by pushing the chain brake lever/hand guard toward the bar while the chain is rotating rapidly.
- Reset the chain brake back into the RUN position by grasping the top of the chain brake lever/hand guard and pulling toward the front handle until you hear a click.

⚠ WARNING:

If the chain brake does not stop the chain immediately, or if the chain brake will not stay in the run position without assistance, take the saw to an authorized service center for repair prior to use.

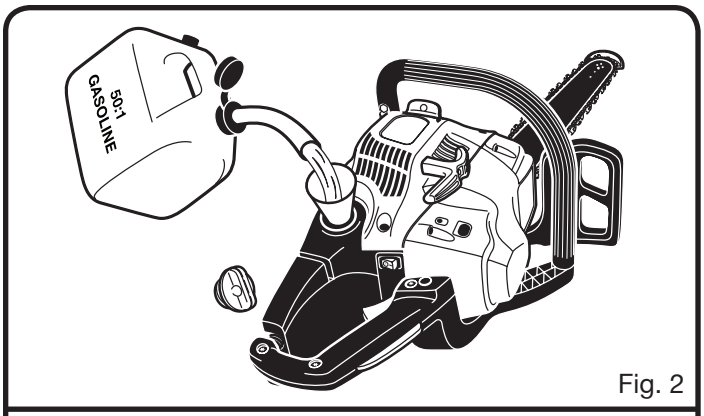


Fig. 2

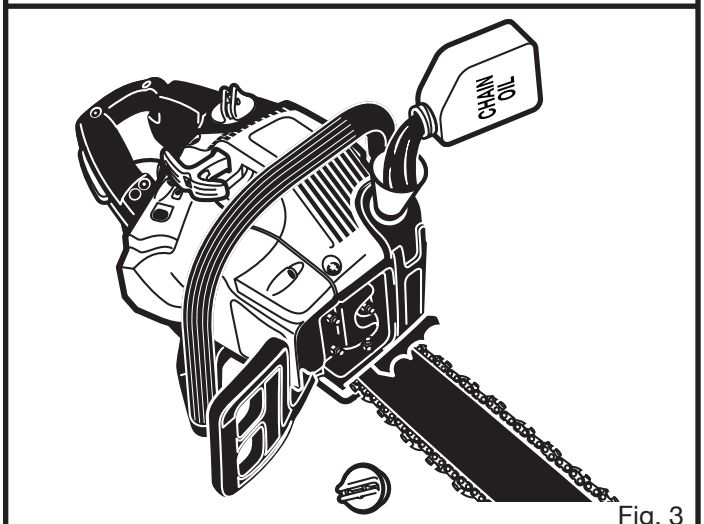


Fig. 3

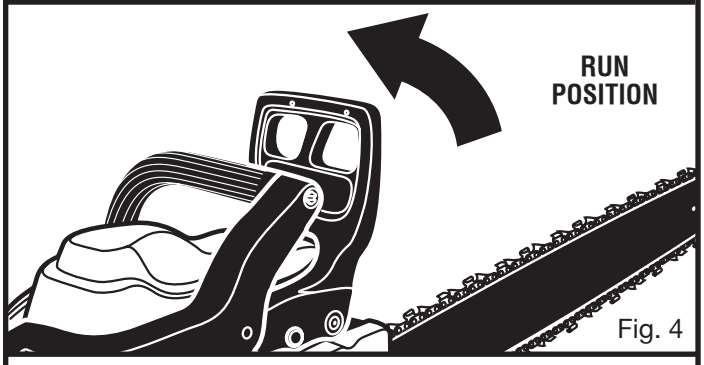


Fig. 4

Fig. 5

STARTING THE ENGINE

See Figures 6 - 11.

Starting the product differs depending on whether the engine is cold or warm.

> **⚠ WARNING:**
>
> Keep your body to the left of the chain line. Never straddle the saw or chain, or lean over past the chain line.

- Place the chain saw on level ground and ensure that no objects or obstructions are in the immediate vicinity that could come in contact with the bar and chain.
- Hold the front handle firmly with your left hand and put your right foot onto the base of the rear handle.

To start the engine:

- Set the ignition switch to the **RUN (I)** position.
- Make sure the chain brake is in the run position by pulling back on the lever/hand guard.
- Fully press and release the primer bulb 7 times.
- Pull choke lever all the way out to **FULL** position. The partial throttle position is automatically set when the choke lever is set at full choke.
- When the temperature is above 50°F, pull the starter grip until the engine attempts to start, but no more than 3 times. When the temperature is below 50°F, pull the starter grip until the engine attempts to start, but no more than 5 times.
- Push choke lever all the way in to the **RUN** position.

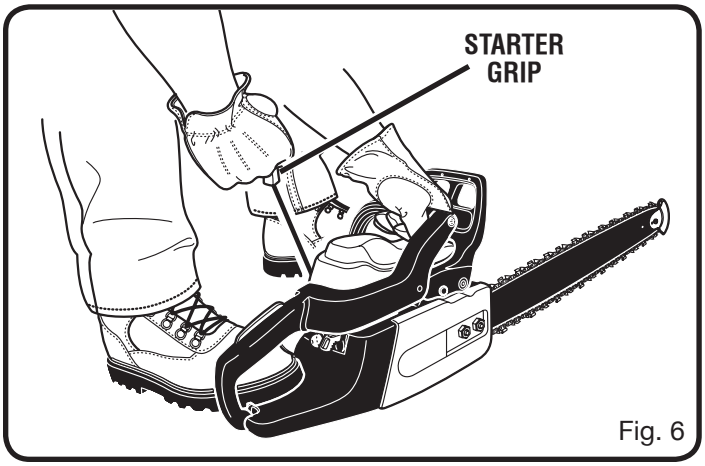


Fig. 6

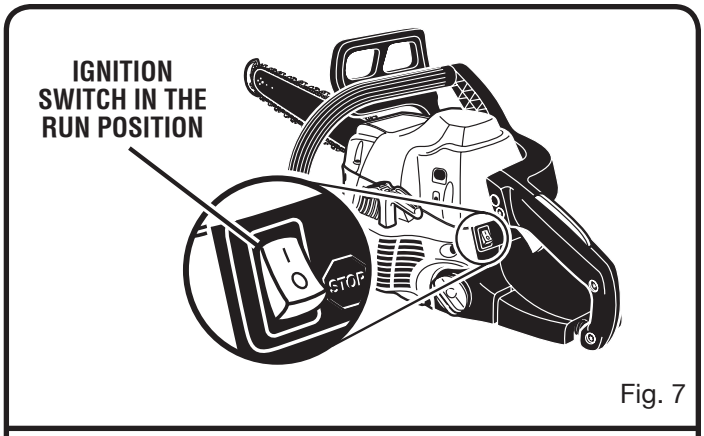


Fig. 7

Fig. 8

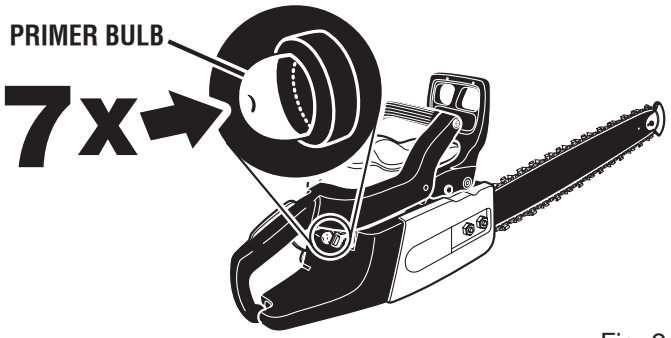


Fig. 9

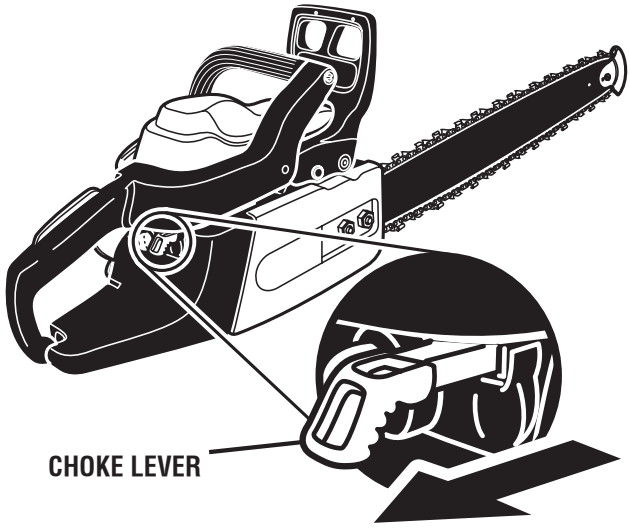


Fig. 10

- Pull starter grip until engine runs.

  NOTE: Allow the saw to run in this position 15-30 seconds, depending upon the temperature.
- Squeeze and release the throttle trigger to return the engine to idle after a total run time of at least 30 seconds.

CAUTION:

Failure to release partial throttle when chain brake lever is in the brake position will result in serious damage to the unit. Never squeeze and hold the throttle trigger while the chain brake is in the brake position.

STOPPING THE ENGINE

See Figures 12 - 14.

Release the throttle trigger and let the engine return to idle. To stop the engine, move the ignition switch to the **STOP** (STOP) position. Do not put the chain saw on the ground when the chain is still moving. For additional safety, set the chain brake when the saw is not in use.

In the event that the ignition switch will not stop the saw, pull the choke lever out to the fully extended position (**FULL CHOKE**/) and engage chain brake to stop the engine. If the ignition switch will not stop the saw when set to the **STOP** position, have the ignition switch repaired before using the chain saw again to prevent unsafe conditions or serious injury.

NOTE: When you are finished using the saw, always relieve tank pressure by loosening, then retightening, the chain oil and fuel mix caps. Allow the engine to cool before storing.

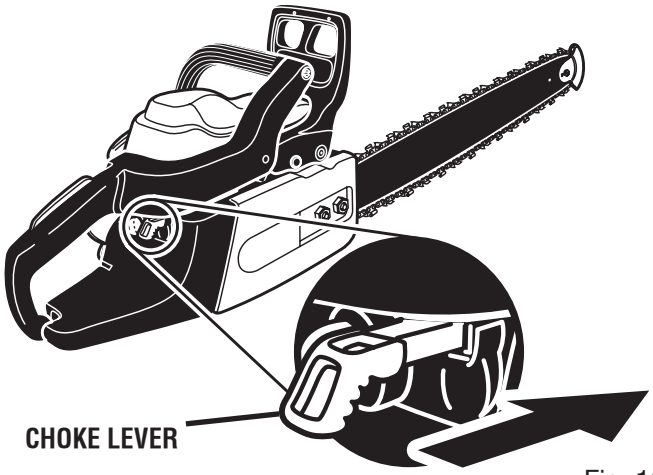


Fig. 11

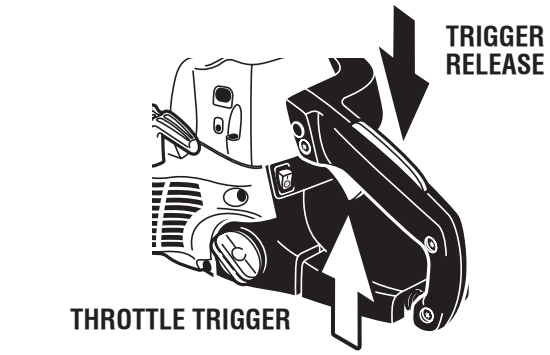


Fig. 12

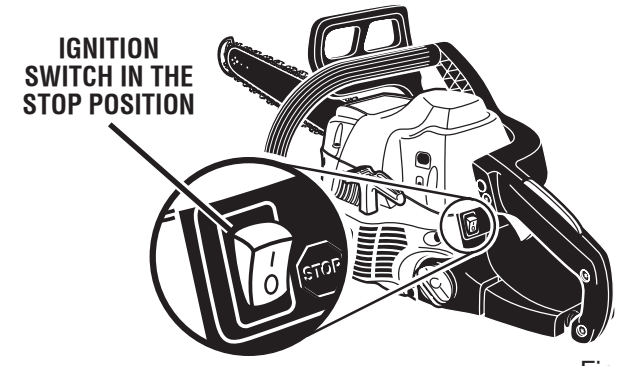


Fig. 13

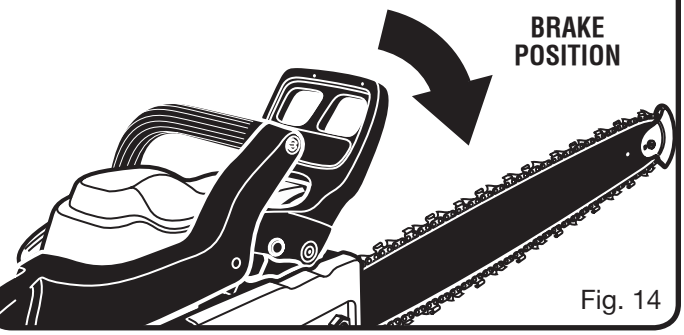


Fig. 14

ADJUSTING IDLE SPEED

See Figure 15.

- If the engine starts, runs, and accelerates, but will not idle, turn the idle speed screw **"T"** clockwise to increase idle speed.
- If the chain turns at idle, turn the idle speed screw **"T"** counterclockwise to reduce the idle RPM and stop the chain movement. If the saw chain still moves at idle speed, contact an authorized service center for adjustment and discontinue use until the repair is made.

⚠ WARNING:

THE SAW CHAIN SHOULD NEVER TURN AT IDLE. Turn the idle speed screw **"T"** counterclockwise to reduce the idle RPM and stop the chain, or contact an authorized service center for adjustment and discontinue use until the repair is made. Serious personal injury may result from the saw chain turning at idle.

PULL AND PUSH

See Figure 16.

The reaction force of the saw is always opposite to the direction the chain is moving. Thus, the operator must be ready to control the PULL when cutting on the bottom edge of the bar and the PUSH when cutting along the top edge.

NOTE: The chain saw has been fully factory tested. It is normal to find some slight oil residue on the saw.

⚠ WARNING:

KICKBACK occurs when the moving chain contacts an object at the upper portion of the tip of the guide bar or when the wood closes in and pinches the saw chain in the cut. Contact at the upper portion of the tip of the guide bar can cause the chain to dig into the object and stop the chain for an instant. The result is a lightning-fast reverse reaction which kicks the guide bar up and back toward the operator. If the saw chain is pinched along the top of the guide bar, the guide bar can be driven rapidly back toward the operator. Either of these reactions can cause loss of saw control, which can result in serious injury.

Do not rely exclusively upon the safety devices built into the saw. As a chain saw user, you should take steps to keep your cutting jobs free from accident or injury. See *General Safety Rules* for more details.

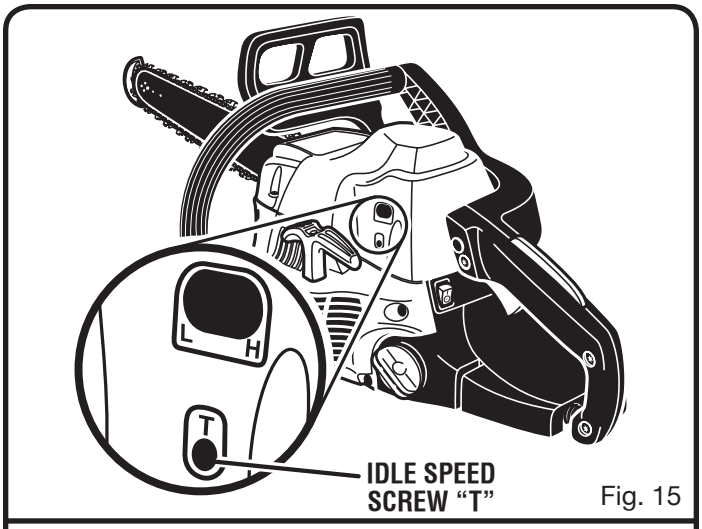


Fig. 15

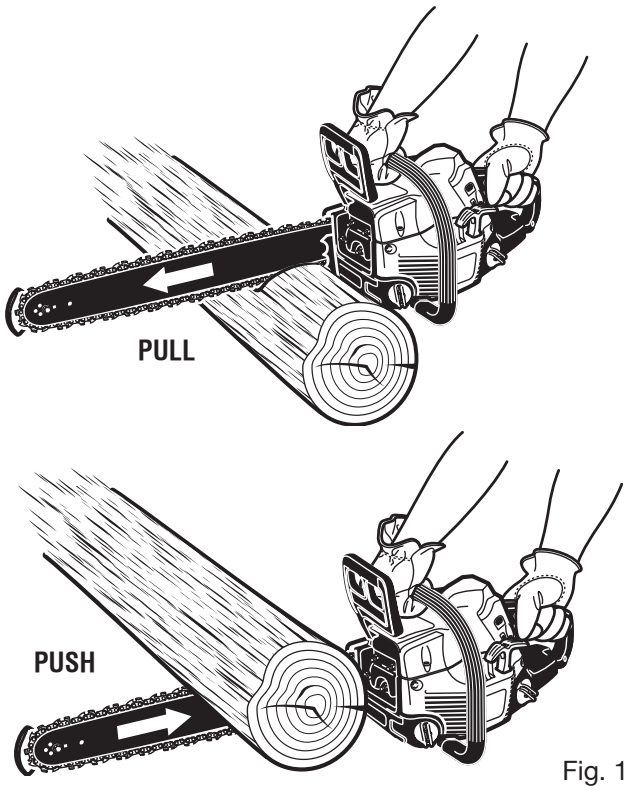


Fig. 16

KICKBACK PRECAUTIONS

See Figures 17 - 18.

Rotational kickback occurs when the moving chain contacts an object at the Kickback Danger Zone of the guide bar. The result is a lightning-fast reverse reaction, which kicks the guide bar up and back towards the operator. This reaction can cause loss of control, which can result in serious injury.

PREPARING FOR CUTTING

PROPER GRIP ON HANDLES

See Figure 19.

See *General Safety Rules* for appropriate safety equipment.

- Wear non-slip gloves for maximum grip and protection.
- Hold the saw firmly with both hands. Always keep your left hand on the front handle and your right hand on the rear handle so that your body is to the left of the chain line.

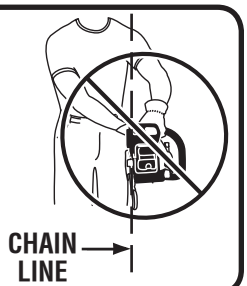
⚠ WARNING:

Never use a left-handed (cross-handed) grip or any stance that would place your body or arm across the chain line.

- Maintain a proper grip on the saw whenever the engine is running. The fingers should encircle the handle and the thumb is wrapped under the handlebar. This grip is least likely to be broken by a kickback or other sudden reaction of the saw. Any grip in which the thumb and fingers are on the same side of the handle is dangerous because a slight kick of the saw can cause loss of control.

⚠ WARNING:

DO NOT operate the throttle trigger with your left hand and hold the front handle with your right hand. Never allow any part of your body to be in the chain line while operating a saw.



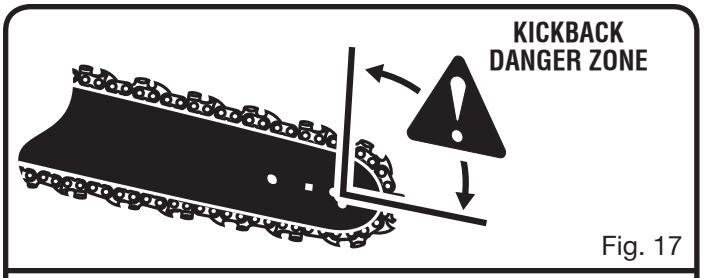


Fig. 17

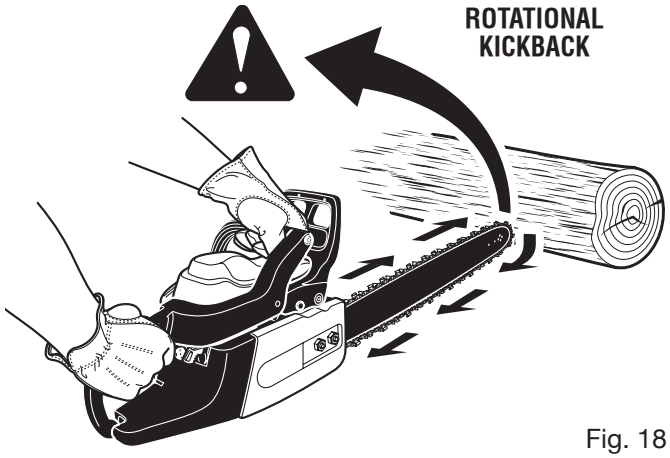
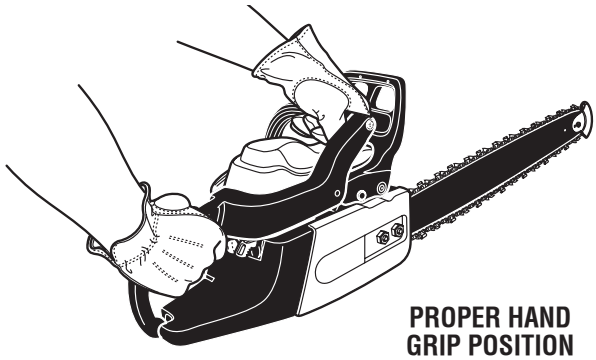


Fig. 18



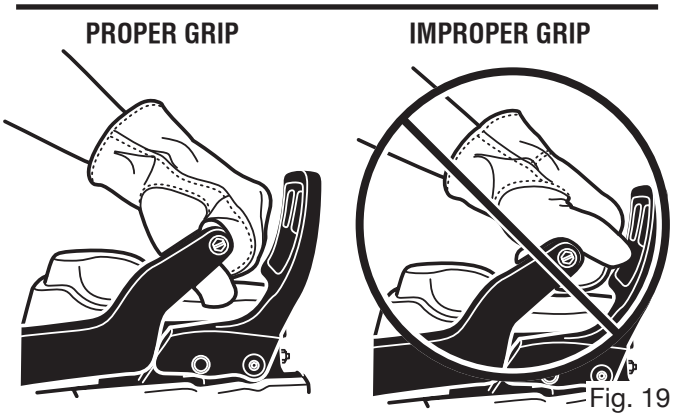


Fig. 19

OPERATION

PROPER CUTTING STANCE

See Figure 20.

- Balance your weight with both feet on solid ground.
- Keep left arm with elbow locked in a "straight arm" position to withstand any kickback force.
- Keep your body to the left of the chain line.
- Keep your thumb on underside of handlebar.

WORK AREA PRECAUTIONS

See Figure 21.

- Cut only wood or materials made from wood; no sheet metal, no plastics, no masonry, no non-wood building materials.
- Never allow children to operate the saw. Allow no person to use this chain saw who has not read this operator's manual or received adequate instructions for the safe and proper use of this chain saw.
- Keep everyone – helpers, bystanders, children, and animals, a **SAFE DISTANCE** from the cutting area. During felling operations, the safe distance should be a least twice the height of the largest trees in the felling area. During bucking operations, keep a minimum distance of 15 feet between workers.
- Always cut with both feet on solid ground to prevent being pulled off balance.
- Do not cut above chest height as a saw held higher is difficult to control against kickback forces.
- Do not fell trees near electrical wires or buildings. Leave this operation for professionals.
- Cut only when visibility and light are adequate for you to see clearly.

BASIC OPERATING/CUTTING PROCEDURES

Practice cutting a few small logs using the following technique to get the "feel" of using the saw before you begin a major sawing operation.

- Take the proper stance in front of the wood with the saw idling.
- Accelerate the engine to full throttle just before entering the cut by squeezing the throttle trigger.

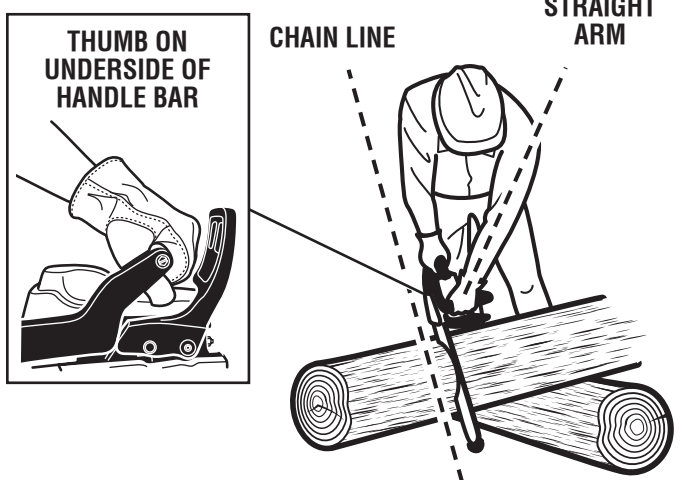


Fig. 20

Fig. 21

- Begin cutting with the saw against the log.
- Keep the engine at full throttle the entire time you are cutting.
- Allow the chain to cut for you; exert only light downward pressure. Forcing the cut could result in damage to the bar, chain, or engine.
- Release the throttle trigger as soon as the cut is completed allowing the engine to idle. Running the saw at full throttle without a cutting load can result in unnecessary wear to the chain, bar, and engine.
- Do not put pressure on the saw at the end of the cut.

FELLING TREES

HAZARDOUS CONDITIONS

⚠ WARNING:

Do not fell trees during periods of high wind or heavy precipitation. Wait until the hazardous weather has ended.

When felling a tree, it is important that you heed the following warnings to prevent possible serious injury.

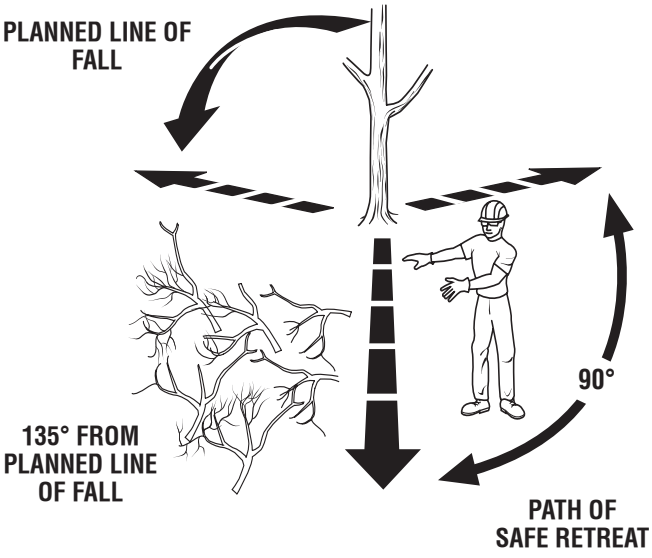
- Do not cut down trees having an extreme lean or large trees with rotten limbs, loose bark, or hollow trunks. Have these trees pushed or dragged down with heavy equipment, then cut them up.
- Do not cut trees near electrical wires or buildings.
- Check the tree for damaged or dead branches that could fall and hit you during felling.
- Periodically glance at the top of the tree during the backcut to assure the tree is going to fall in the desired direction.
- If the tree starts to fall in the wrong direction, or if the saw gets caught or hung up during the fall, leave the saw and save yourself!

PROPER PROCEDURE FOR TREE FELLING

See Figures 22 - 25.

- Pick your escape route (or routes in case the intended route is blocked). Clear the immediate area around the tree and make sure there are no obstructions in your planned path of retreat. Clear the path of safe retreat approximately 135° from the planned line of fall.
- Consider the force and direction of the wind, the lean and balance of the tree, and the location of large limbs. These things influence the direction in which the tree will fall. Do not try to fell a tree along a line different from its natural line of fall.
- Cut a notch about 1/3 the diameter of the trunk in the side of the tree. Make the notch cuts so they intersect at a right angle to the line of fall. This notch should be cleaned out to leave a straight line. To keep the weight of the wood off the saw, always make the lower cut of the notch before the upper cut.
- Make the backcut level and horizontal, and at a minimum of 2 in. above the horizontal cut of the notch.

  NOTE: Never cut through to the notch. Always leave a band of wood between the notch and back cut (approximately 2 in. or 1/10 the diameter of the tree). This is called “hinge” or “hingewood.” It controls the fall of the tree and prevents slipping or twisting or shootback of the tree off the stump.



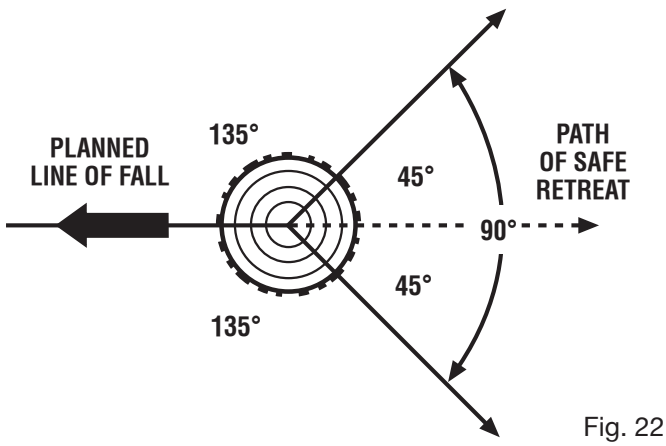


Fig. 22

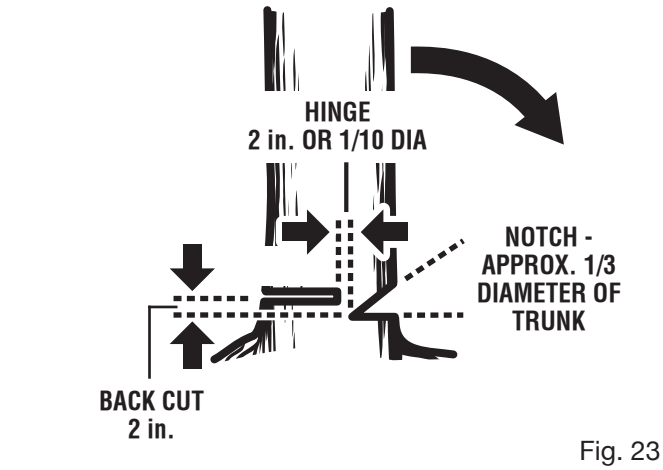


Fig. 23

- On large diameter trees, stop the back cut before it is deep enough for the tree to either fall or settle back on the stump. Then insert soft wooden or plastic wedges into the cut so they do not touch the chain. Drive wedges in, little by little, to help jack the tree over.
- When bucking or felling with a wedge, it may be necessary to remove the SAFE-T-TIP anti-kickback device to allow the bar to be drawn through the cut. After you complete the cut, reinstall the tip immediately.
- As tree starts to fall, stop the chain saw and put it down immediately. Retreat along the cleared path, but watch the action in case something falls your way.

⚠ WARNING:

Never cut through to the notch when making a back cut. The hinge controls the fall of the tree, this is the section of wood between the notch and backcut.

REMOVING BUTTRESS ROOTS

See Figure 26.

A buttress root is a large root extending from the trunk of the tree above the ground. Remove large buttress roots prior to felling. Make the horizontal cut into the buttress first, followed by the vertical cut. Remove the resulting loose section from the work area. Follow the correct tree felling procedure as stated in **Proper Procedure For Tree Felling** after you have removed the large buttress roots.

BUCKING

See Figure 27.

Bucking is the term used for cutting a fallen tree to the desired log length.

- Cut only one log at a time.
- Support small logs on a saw horse or another log while bucking.
- Keep a clear cutting area. Make sure that no objects can contact the guide bar nose and chain during cutting, this can cause kickback. To avoid the danger, keep the SAFE-T-TIP anti-kickback device attached while cutting. Refer to **Kickback** in the *Specific Safety Rules* section of this manual for more information.
- During bucking operations, stand on the uphill side so that the cut-off section of the log cannot roll over you.
- Sometimes it is impossible to avoid pinching (with just standard cutting techniques) or difficult to predict which way a log will settle when cut.

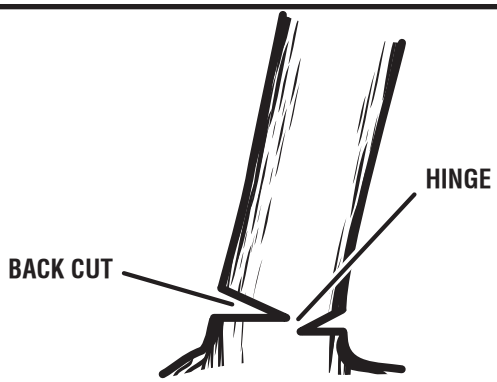


Fig. 24

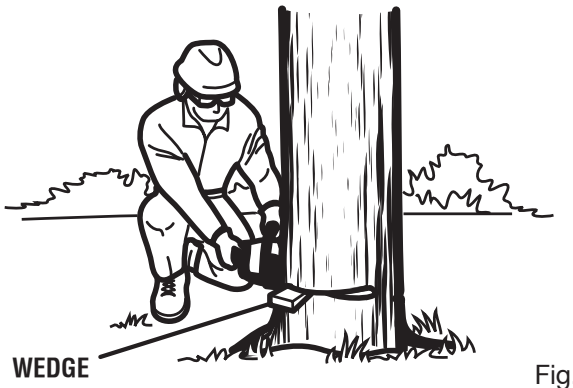


Fig. 25

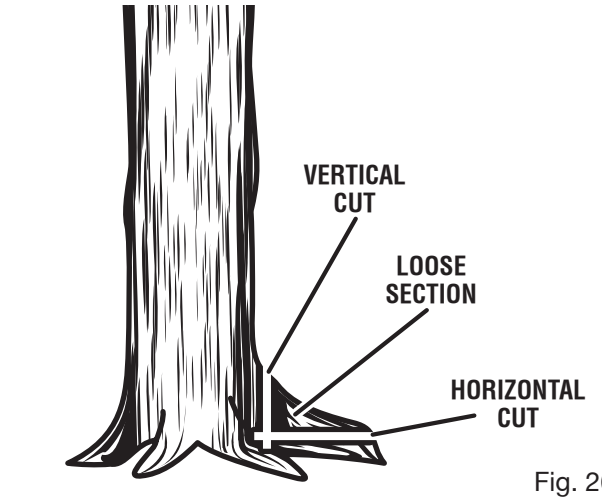


Fig. 26

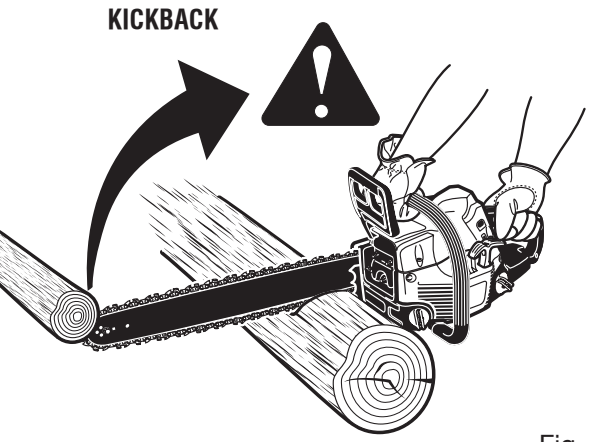


Fig. 27

BUCKING WITH A WEDGE

See Figure 28.

If the wood diameter is large enough for you to insert a soft bucking wedge without touching the chain, you should use the wedge to hold the cut open to prevent pinching.

NOTE: When bucking or felling with a wedge, you may need to remove the SAFE-T-TIP anti-kickback device to allow the bar to be drawn through the cut. After you complete the cut, reinstall the tip.

BUCKING LOGS UNDER STRESS

See Figure 29.

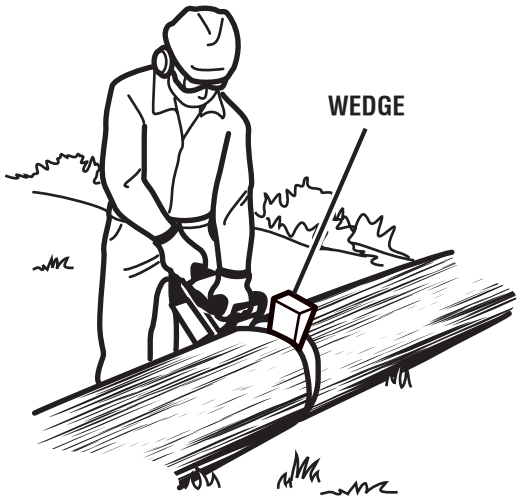
Make the first bucking cut 1/3 of the way through the log and finish with a 2/3 cut on the opposite side. As you cut the log, it will tend to bend. The saw can become pinched or hung in the log if you make the first cut deeper than 1/3 of the diameter of the log.

Give special attention to logs under stress to prevent the bar and chain from pinching.

OVERBUCKING

See Figure 30.

Begin on the top side of the log with the bottom of the saw against the log; exert light pressure downward. Note that the saw will tend to pull away from you.



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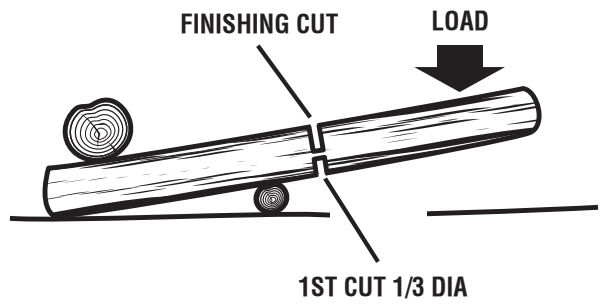


Fig. 29

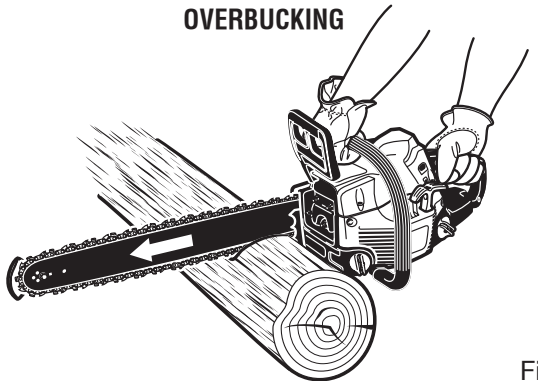


Fig. 30

UNDERBUCKING

See Figure 31.

Begin on the under side of the log with the top of the saw against the log; exert light pressure upward. During underbucking, the saw will tend to push back at you. Be prepared for this reaction and hold the saw firmly to maintain control.

LIMBING AND PRUNING

See Figures 32 - 33.

- Work slowly, keeping both hands on the saw with a firm grip. Maintain secure footing and balance.
- Keep the tree between you and the chain while limbing.
- Do not cut from a ladder. This is extremely dangerous. Leave this operation for professionals.
- Do not cut above chest height. A saw held higher than chest height is difficult to control against kickback.

⚠ WARNING:

Never climb into a tree to limb or prune. Do not stand on ladders, platforms, a log, or in any position which can cause you to lose your balance or control of the saw.

- When pruning trees it is important not to make the flush cut next to the main limb or trunk until you have cut off the limb further out to reduce the weight. This prevents stripping the bark from the main member.
  - Underbuck the branch 1/3 through for your first cut.
  - Overbuck the branch to drop it.
  - Finish by cutting smoothly and neatly against the main member so the bark will grow back to seal the wound.

⚠ WARNING:

If the limbs to be pruned are above chest height, hire a professional to perform the pruning.

CUTTING SPRINGPOLES

See Figure 34.

A springpole is any log, branch, rooted stump, or sapling which is bent under tension by other wood so that it springs back if the wood holding it is cut or removed. On a fallen tree, a rooted stump has a high potential of springing back to the upright position during the bucking cut to separate the log from the stump. Watch out for springpoles — they are dangerous.

⚠ WARNING:

Springpoles are dangerous and could strike the operator, causing the operator to lose control of the chain saw. This could result in severe or fatal injury to the operator.

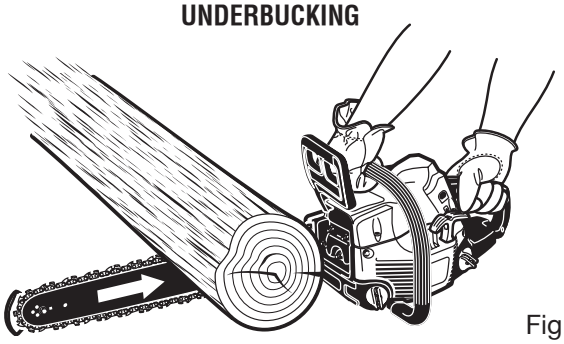


Fig. 31

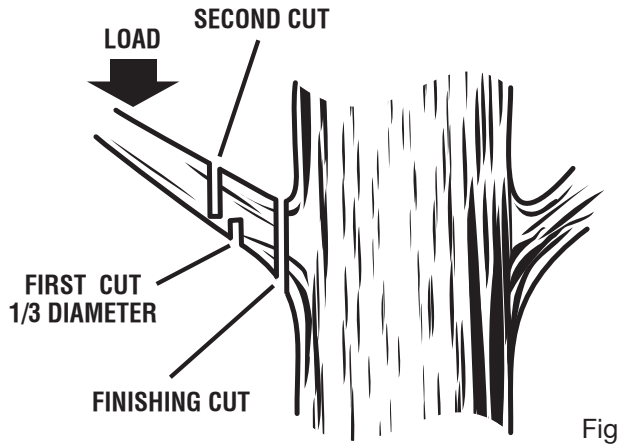
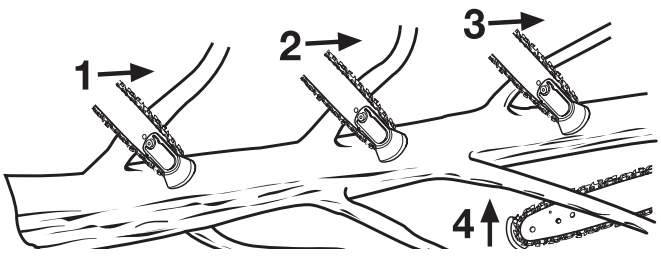


Fig. 32



CUT LIMBS ONE AT A TIME AND LEAVE SUPPORT LIMBS UNDER TREE UNTIL LOG IS CUT

Fig. 33

SPRINGPOLE

Fig. 34

MAINTENANCE

⚠ WARNING:

When servicing, use only identical Homelite replacement parts. Use of any other parts may create a hazard or cause product damage.

⚠ WARNING:

Always wear safety goggles or safety glasses with side shields during power tool operation or when blowing dust. If operation is dusty, also wear a dust mask.

GENERAL MAINTENANCE

Avoid using solvents when cleaning plastic parts. Most plastics are susceptible to damage from various types of commercial solvents and may be damaged by their use. Use clean cloths to remove dirt, dust, oil, grease, etc.

⚠ WARNING:

Do not at any time let brake fluids, gasoline, petroleum-based products, penetrating oils, etc., come in contact with plastic parts. Chemicals can damage, weaken or destroy plastic which may result in serious personal injury.

LUBRICATION

All of the bearings in this product are lubricated with a sufficient amount of high grade lubricant for the life of the unit under normal operating conditions. Therefore, no further lubrication is required.

REPLACING THE GUIDE BAR AND CHAIN

See Figures 35 - 44.

⚠ DANGER:

Never start the engine before installing the guide bar, chain, drivecase cover, and clutch drum. Without all these parts in place, the clutch can fly off or explode, exposing the user to possible serious injury.

⚠ WARNING:

To avoid serious personal injury, read and understand all the safety instructions in this section.

- Always place the switch in the **STOP "(STOP)"** position before you work on the saw.
- Make sure the chain brake is not set by pulling the chain brake lever/hand guard towards the front handle to the run position.

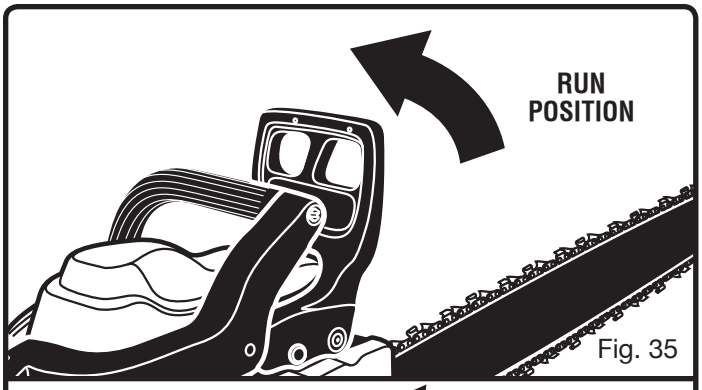


Fig. 35

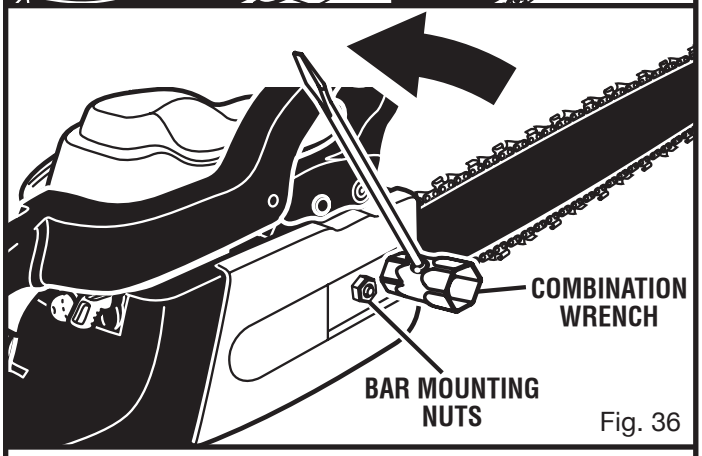


Fig. 36

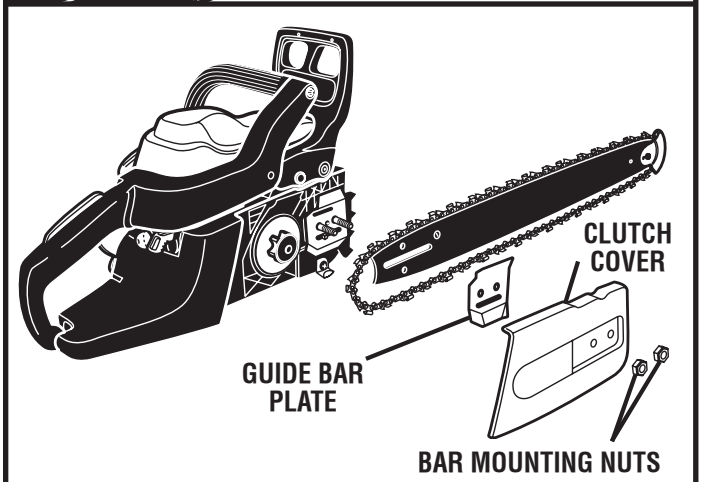


Fig. 37

NOTE: When replacing the guide bar and chain, always use the specified bar and chain listed in the **Bar and Chain Combinations** section later in this manual.

- Wear gloves when handling the chain and bar. These components are sharp and may contain burrs.
- Remove the bar mounting nuts using the combination wrench provided.
- Remove the clutch cover and the outer guide bar plate.
- Remove the bar and chain from the mounting surface.
- Remove the old chain from the bar.

- Lay out the new saw chain in a loop and straighten any kinks. The cutters should face in the direction of chain rotation. If they face backwards, turn the loop over.
- Place the chain drive links into the bar groove as shown.
- Position the chain so there is a loop at the back of the bar.
- Hold the chain in position on the bar and place the loop around the sprocket.
- Fit the bar flush against the mounting surface so that the bar studs are in the long slot of the bar.

  NOTE: When placing the bar on the bar studs, ensure that the adjusting pin is in the chain tension pin hole.

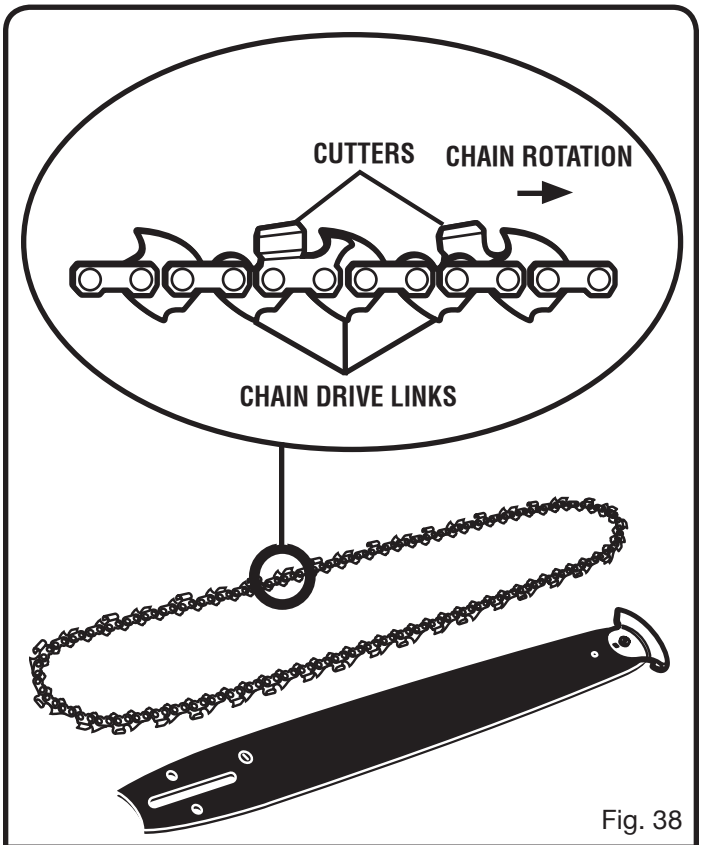


Fig. 38

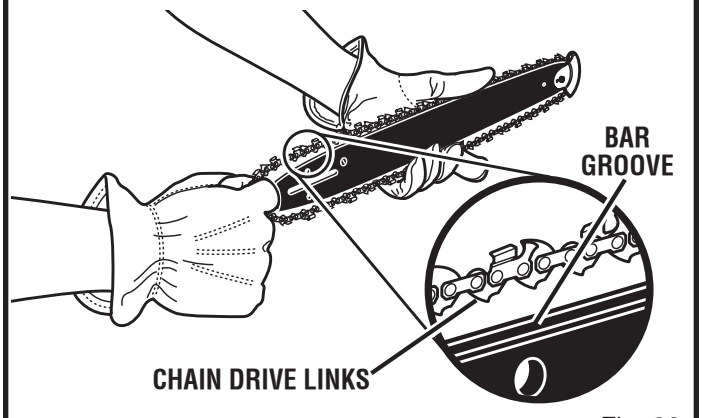


Fig. 39

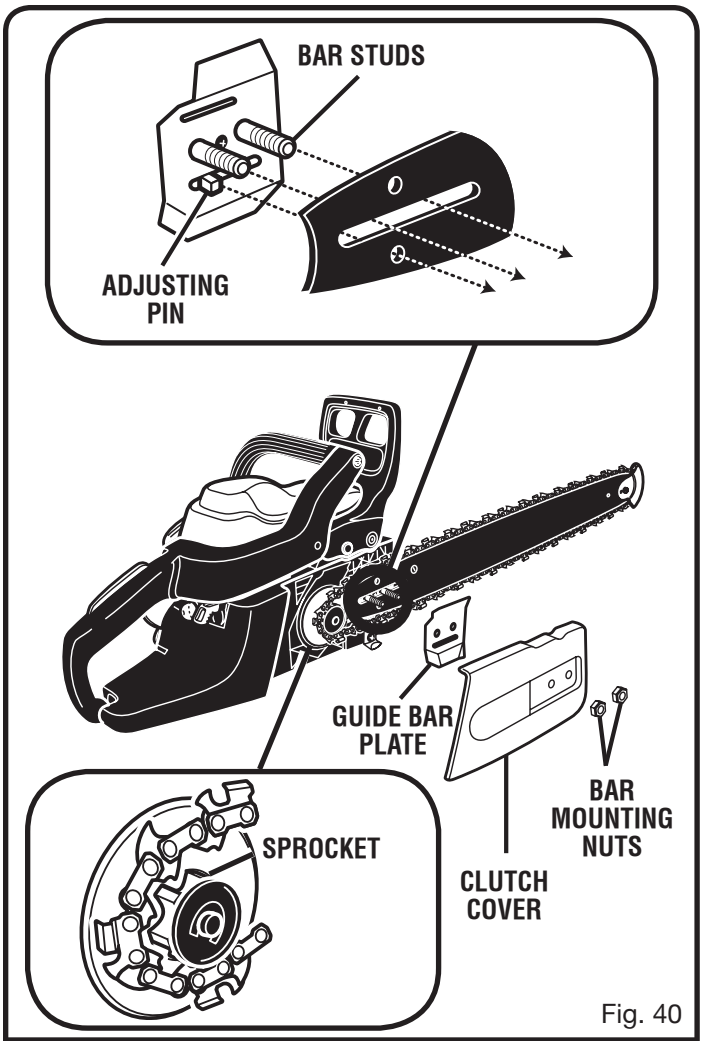


Fig. 40

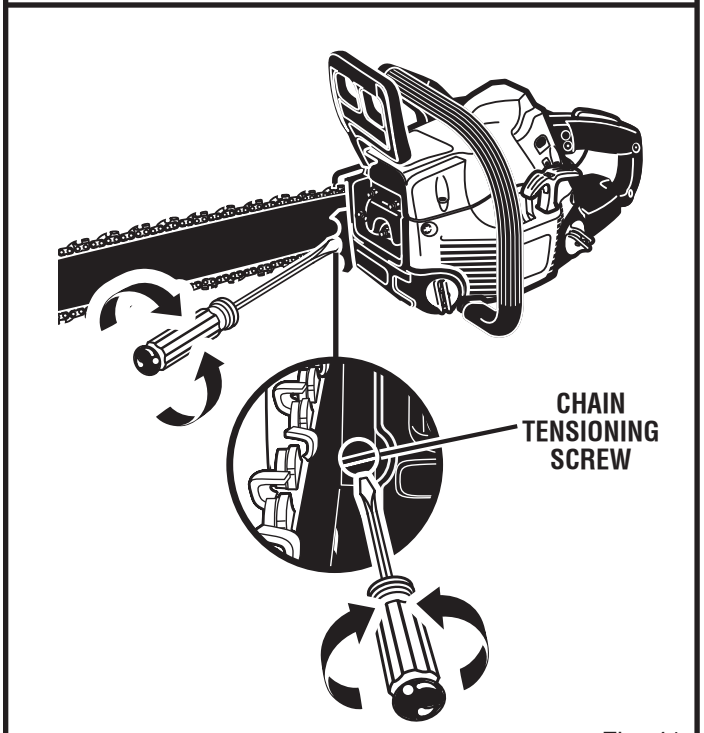


Fig. 41

- Replace the outer guide bar plate ensuring that the bar pin groove is at the bottom with the upper and lower edges angled away from the guide bar.
- Replace the clutch cover and bar mounting nuts.
- Finger-tighten the bar mounting nuts. The bar must be free to move for tension adjustment.
- Remove all slack from the chain by turning the chain tensioning screw clockwise until the chain seats snugly against the bar with the drive links in the bar groove.
- Lift the tip of the guide bar up to check for sag.
- Release the tip of the guide bar and turn the chain tensioning screw 1/2 turn clockwise. Repeat this process until sag does not exist.
- Hold the tip of the guide bar up and tighten the bar mounting nuts securely.

The chain is correctly tensioned when there is no sag on the underside of the guide bar, the chain is snug, but it can be turned by hand without binding. Ensure that the chain brake is not set.

NOTE: If chain is too tight, it will not rotate. Loosen the bar nuts slightly and turn the tension adjuster 1/4 turn counterclockwise. Lift the tip of the guide bar up and retighten the bar nuts securely. Ensure that the chain will rotate without binding.

ADJUSTING THE CHAIN TENSION

See Figures 45 - 47.

> **⚠ WARNING:**
>
> Never touch or adjust the chain while the motor is running. The saw chain is very sharp. Always wear protective gloves when performing maintenance on the chain.

- Stop the engine before setting the chain tension.
- Make sure the bar mounting nuts are loosened to finger tight.
- Turn the chain tensioning screw clockwise to tension the chain.

  NOTE: A cold chain is correctly tensioned when there is no slack on the underside of the guide bar, the chain is snug, and it can be turned by hand without binding.

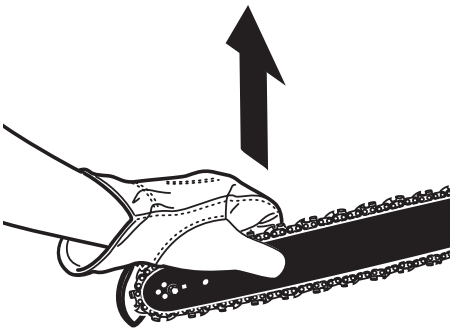


Fig. 42

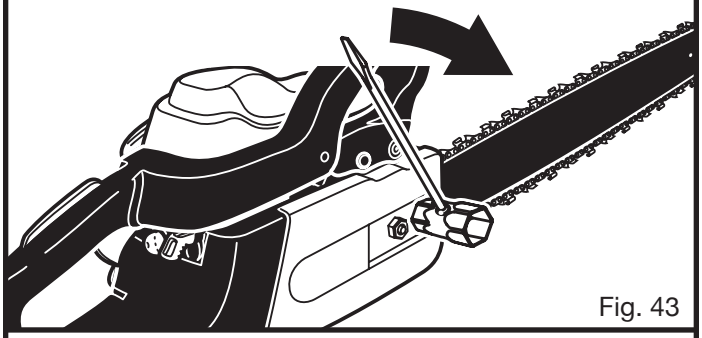


Fig. 43

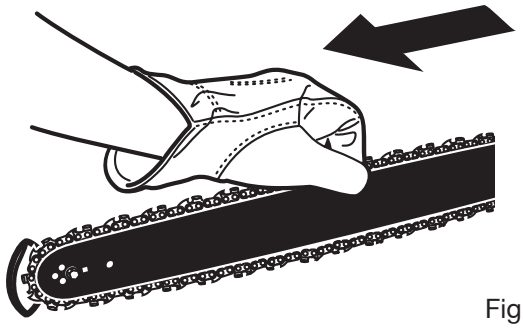


Fig. 44

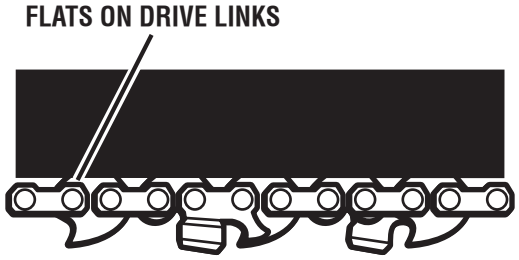


Fig. 45

- Retension the chain whenever the flats on the drive links hang out of the bar groove.

  NOTE: During normal saw operation, the temperature of the chain increases. The drive links of a correctly tensioned warm chain will hang approximately .050 in. out of the bar groove. The tip of the combination wrench can be used as a guide to help determine the correct warm chain tension.

  NOTE: New chains tend to stretch; check the chain tension frequently and tension as required.

⚠ CAUTION:

A chain tensioned while warm may be too tight upon cooling. Check the "cold tension" before next use.

CHAIN MAINTENANCE

See Figures 48 - 49.

⚠ CAUTION:

Check that the switch is in the **STOP** "STOP" position before you work on the saw.

Use only a low-kickback chain on this saw. This fast-cutting chain provides kickback reduction when properly maintained.

For smooth and fast cutting, maintain the chain properly.

The chain requires sharpening when the wood chips are small and powdery, the chain must be forced through the wood during cutting, or the chain cuts to one side. During maintenance of the chain, consider the following:

- Improper filing angle of the side plate can increase the risk of severe kickback.
- Raker (depth gauge) clearance.
  - Too low increases the potential for kickback.
  - Not low enough decreases cutting ability.
- If the cutter teeth hit hard objects such as nails and stones, or are abraded by mud or sand on the wood, have an authorized service center sharpen the chain.

  NOTE: Inspect the drive sprocket for wear or damage when replacing the chain. If signs of wear or damage are present in the areas indicated, have the drive sprocket replaced by an authorized service center.

NOTE: If you do not fully understand the correct procedure for sharpening the chain after reading the instructions that follow, have the saw chain sharpened by an authorized service center or replace with a recommended low-kickback chain.

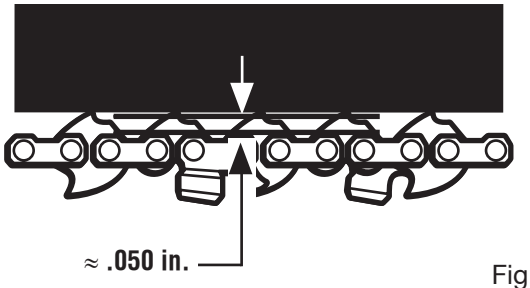


Fig. 46

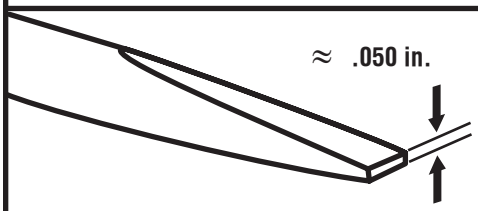


Fig. 47

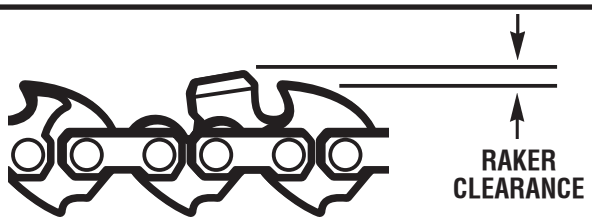


Fig. 48

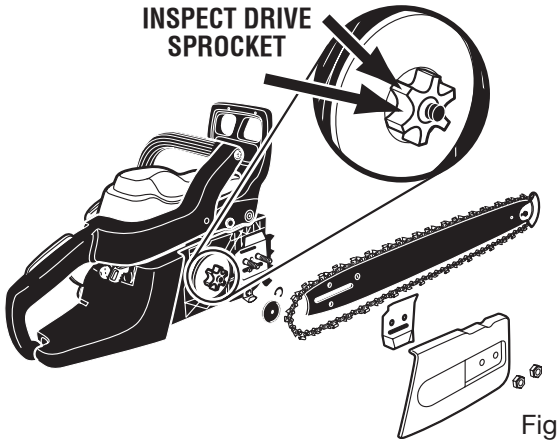


Fig. 49

SHARPENING THE CUTTERS

See Figures 50 - 53.

Be careful to file all cutters to the specified angles and to the same length, as fast cutting can only be obtained when all cutters are uniform.

⚠ WARNING:

The saw chain is very sharp. Always wear protective gloves when performing maintenance to the chain to prevent serious personal injury.

- Tension the chain prior to sharpening. Refer to **Adjusting The Chain Tension**.
- Use a 5/32 in. diameter round file and holder. Do all of your filing at the midpoint of the bar.
- Keep the file level with the top plate of the tooth. Do not let the file dip or rock.
- Using light but firm pressure. Stroke towards the front corner of the tooth.
- Lift the file away from the steel on each return stroke.
- Put a few firm strokes on every tooth. File all left hand cutters in one direction. Then move to the other side and file the right hand cutters in the opposite direction.
- Remove filings from the file with a wire brush.

CAUTION:

A dull or improperly sharpened chain can cause excessive engine speed during cutting, which may result in severe engine damage.

⚠ WARNING:

Improper chain sharpening increases the potential of kickback.

⚠ WARNING:

Failure to replace or repair a damaged chain can cause serious injury.

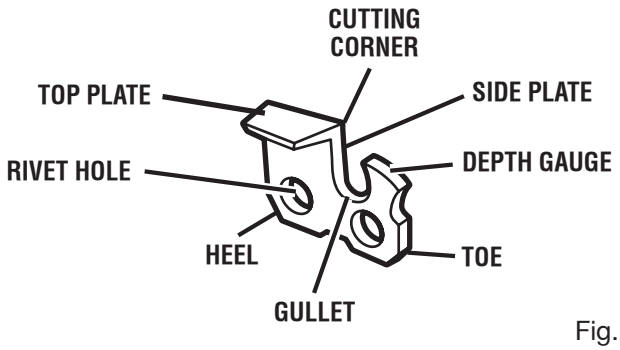


Fig. 50

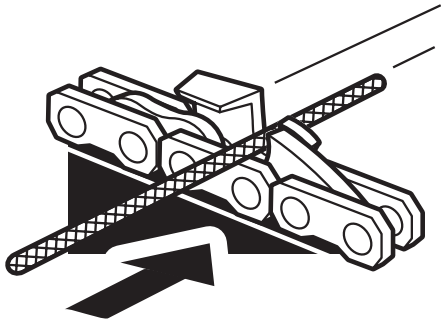


Fig. 51

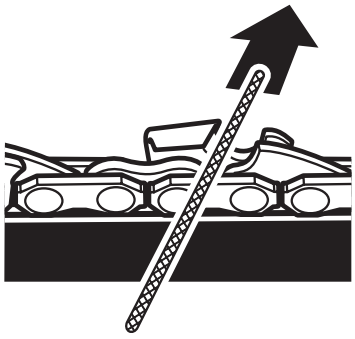


Fig. 52

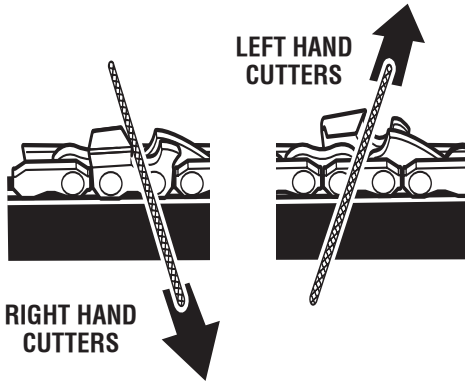


Fig. 53

MAINTENANCE

TOP PLATE FILING ANGLE

See Figure 54.

- CORRECT 30° – file holders are marked with guide marks to align file properly to produce correct top plate angle.
- LESS THAN 30° – for cross cutting.
- MORE THAN 30° – feathered edge dulls quickly.

SIDE PLATE ANGLE

See Figure 55.

- CORRECT 80° – Produced automatically if you use the correct diameter file in the file holder.
- HOOK – "Grabs" and dulls quickly; increases the potential of KICKBACK. Results from using a file with a diameter too small or a file held too low.
- BACKWARD SLOPE – Needs too much feed pressure; causes excessive wear to the bar and chain. Results from using a file with a diameter too large or file held too high.

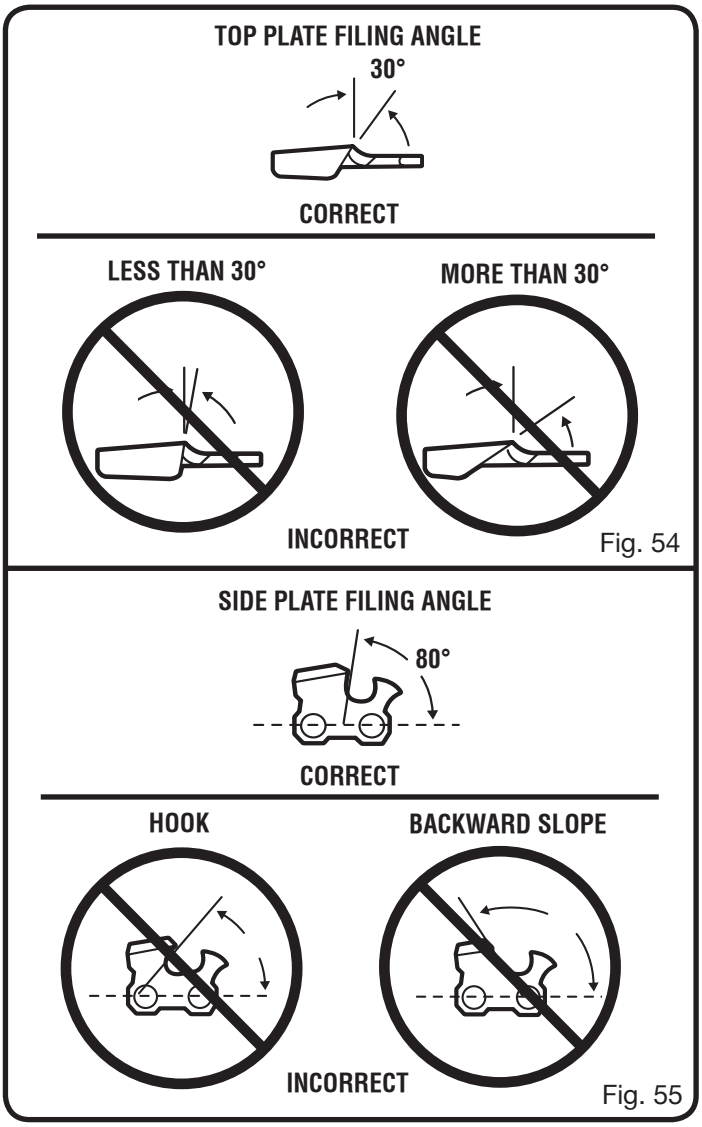


Fig. 54

Fig. 55

MAINTAINING DEPTH GAUGE CLEARANCE

See Figure 56 - 58.

- Maintain the depth gauge at a clearance of .025 in. Use a depth gauge tool for checking the depth gauge clearances.
- Every time the chain is filed, check the depth gauge clearance.
- Use a flat file and a depth gauge jointer to lower all gauges uniformly. Use a .025 in. depth gauge jointer. After lowering each depth gauge, restore original shape by rounding the front. Be careful not to damage adjoining drive links with the edge of the file.
- Depth gauges must be adjusted with the flat file in the same direction the adjoining cutter was filed with the round file. Use care not to contact cutter face with flat file when adjusting depth gauges.

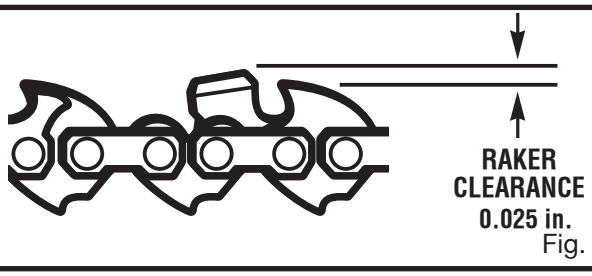


Fig. 56

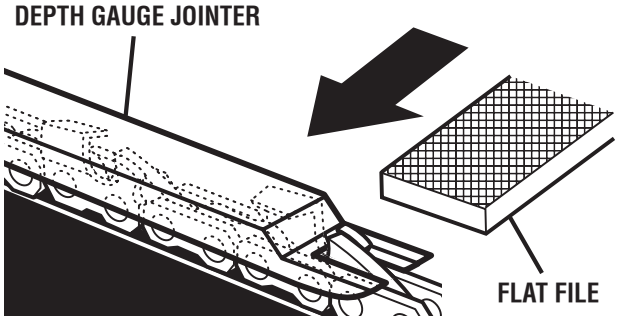


Fig. 57

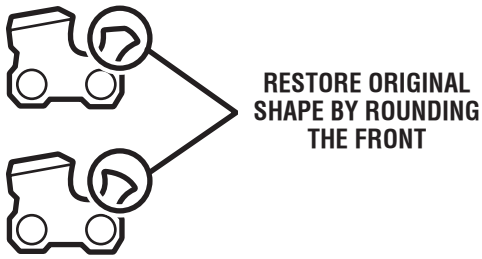


Fig. 58

MAINTAINING THE GUIDE BAR

See Figure 59.

⚠ CAUTION:

Make sure the chain has stopped before you do any work on the saw.

Every week of use, reverse the guide bar on the saw to distribute the wear for maximum bar life. The bar should be cleaned every day of use and checked for wear and damage.

Feathering or burring of the bar rails is a normal process of bar wear. Such faults should be smoothed with a file as soon as they occur.

A bar with any of the following faults should be replaced:

- Wear inside the bar rails that permits the chain to lay over sideways
- Bent guide bar
- Cracked or broken rails
- Spread rails

Lubricate guide bars weekly with a sprocket at their tip. Using a grease syringe, lubricate weekly in the lubricating hole. Turn the guide bar and check that the lubrication holes and chain groove are free from impurities.

MOUNTING THE SAFE-T-TIP NOSE GUARD

See Figures 60 - 61.

- Stop the engine and disconnect the spark plug wire.
- Mount the SAFE-T-TIP on the bar nose.
- Fit the locking rivet or tab in the recessed hole in the guide bar.
- Tighten the screw with wrench until snug.
- From the snug position, tighten the screw an additional 3/4 of a turn using a wrench.

MAINTAINING THE SAFE-T-TIP NOSE GUARD

See Figures 60 - 61.

⚠ CAUTION:

Make sure the chain has stopped before you do any work on the saw.

⚠ WARNING:

Although the guide bar comes with a SAFE-T-TIP anti-kickback device already installed, check the tightness of the mounting screw before each use.

Use the following instructions to tighten the mounting screw of the nose guard. These are specially hardened screws. If you cannot install the screw tightly, replace both the screw and the SAFE-T-TIP before further operation.

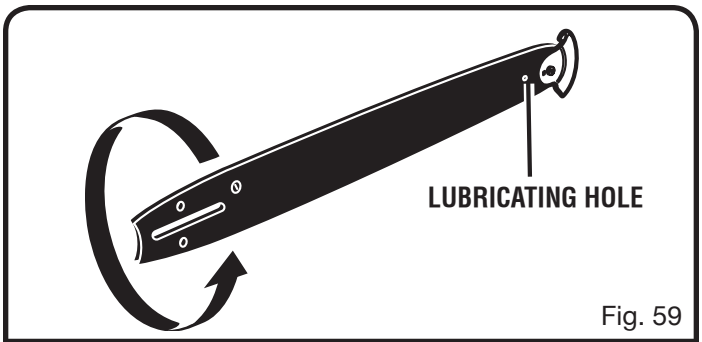


Fig. 59

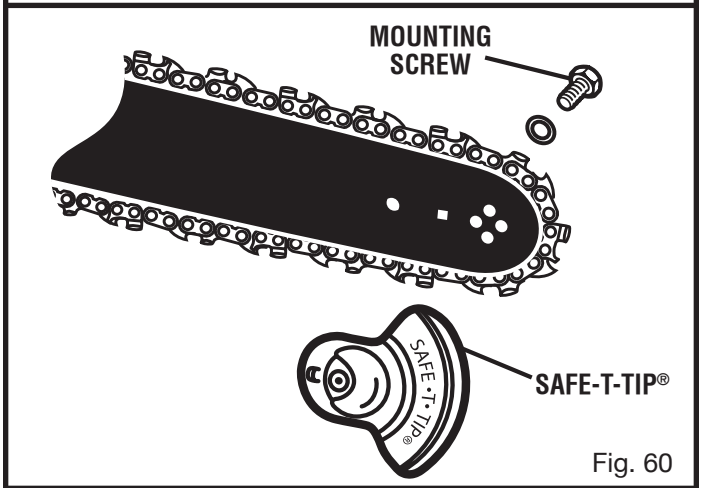


Fig. 60

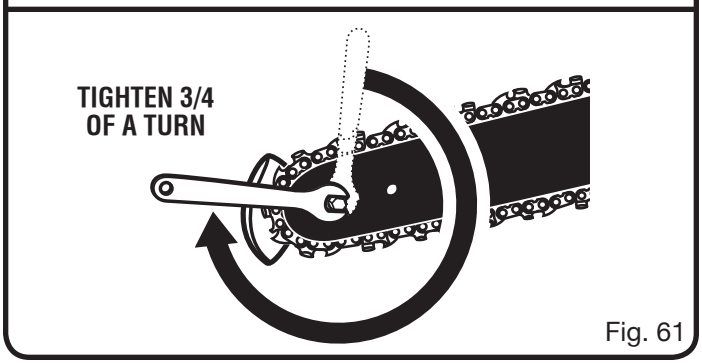


Fig. 61

NOTE: Do not replace the screw with an ordinary screw. Use only identical replacement parts from the manufacturer when replacing parts.

In addition to preventing chain contact with solid objects at the nose of the bar, the SAFE-T-TIP also helps keep the chain away from abrasive surfaces, such as the ground. Keep it on the right hand side of the bar where it will be between the chain and the ground during flush with ground cutting.

The mounting screw requires a 5/16 in. wrench (or adjustable wrench) to achieve the recommended torque of 35 to 45 in. lb. A torque within this range can be achieved by using the following method.

- Tighten the screw with wrench until snug.
- From the snug position, tighten the screw an additional 3/4 of a turn using a wrench.

CLEANING THE AIR FILTER

See Figures 62 - 64.

- For access to the air filter and carburetor area, loosen the three screws holding the cylinder cover.
- Activate chain brake.
- Lift the front of the cylinder cover past chain brake lever.
- Lift the back of the cylinder cover past the handle.
- Before removing the air filter from the carburetor, blow or brush as much loose dirt and sawdust from around the carburetor and chamber as possible.

  NOTE: Make sure to pull the choke rod out to keep the carburetor from being contaminated.
- Remove the screw securing the air filter.
- Position a flat screwdriver between the tabs and twist to release from the air filter base.
- Lift the air filter off the air filter base.

Choose one of the following cleaning options:

- To lightly clean, tap the filter against a smooth, flat surface to dislodge most saw dust and dirt particles.
- After every 5 hours of operation, clean in warm soapy water, rinse, and let dry completely. Replace with a new filter after every 25 hours of use.

  NOTE: An alternate method is to clean the filter with compressed air. Always wear eye protection to avoid eye injury.
- Reinstall the air filter, making sure that the tabs on the air filter are located in channels on the air filter bottom before tightening filter retaining screws.
- Clean the pre-filter every 5 hours of use or sooner, if required. Remove the cylinder cover, starter assembly, and the fan housing baffle for access to the pre-filter in the engine housing.

  NOTE: If you use an air hose for drying, blow through both sides of filter.

⚠ CAUTION:

Make sure the air filter is correctly placed in the air filter cover before reassembly. Never run the engine without the air filter, serious damage could result.

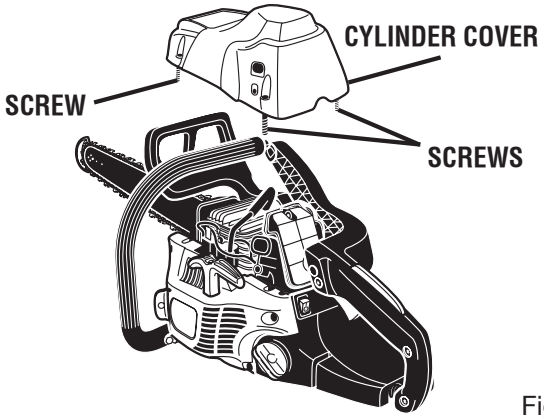


Fig. 62

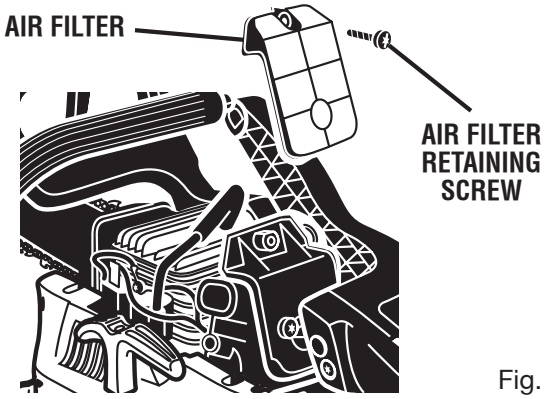


Fig. 63

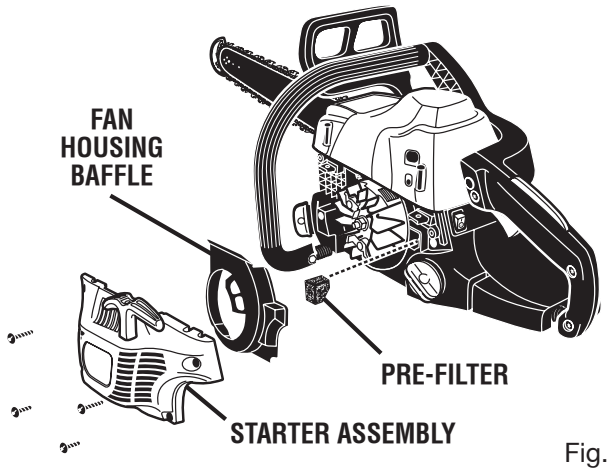


Fig. 64

ADJUSTING THE CARBURETOR

See Figures 65 - 67.

Before adjusting the carburetor:

- Use a brush or compressed air to clean the starter cover vents.
- Clean the air filter. Refer to **Cleaning the Air Filter** in the *Maintenance* section of this manual.
- Allow the engine to warm up prior to adjustment of engine idle speed.

> **⚠ WARNING:**
>
> Weather conditions and altitude may affect carburetion. Do not allow bystanders close to the chain saw while adjusting the carburetor.

Idle Speed Adjustment — The idle speed adjustment controls how much the throttle valve stays open when the throttle trigger is released. To adjust:

- Turn idle speed screw **"T"** clockwise to increase idle speed.
- Turn idle speed screw **"T"** counterclockwise to decrease idle speed.

> **⚠ WARNING:**
>
> THE SAW CHAIN SHOULD NEVER TURN AT IDLE. Serious personal injury may result from the saw chain turning at idle.

CLEANING THE STARTER UNIT

See Figure 66.

Use a brush or compressed air to keep the cooling vents of the starter assembly free and clean of debris.

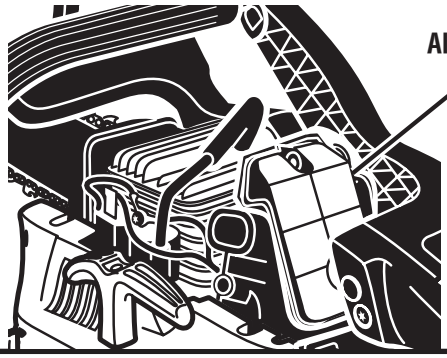


Fig. 65

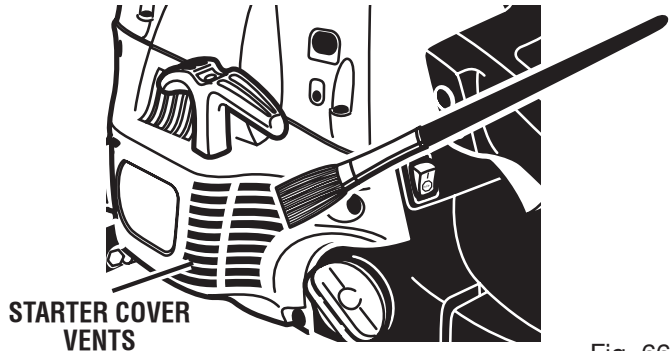


Fig. 66

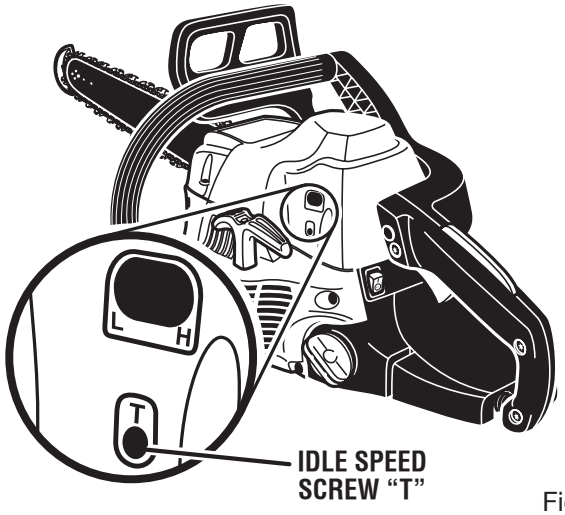


Fig. 67

CLEANING THE ENGINE

See Figures 68 - 69.

Clean the cylinder fins and flywheel fins with compressed air or a brush periodically. Dangerous overheating of the engine may occur due to impurities on the cylinder.

> **⚠ WARNING**
>
> Never run the saw without all the parts, including the drivecase cover and starter housing, securely in place.
>
> Because parts can fracture and pose a danger of thrown objects, leave repairs of the flywheel and clutch to factory trained authorized service center personnel.

NOTE: If you notice a power loss with the gas-powered tool, the exhaust port and muffler may be blocked with carbon deposits. These deposits may need to be removed to restore performance. We highly recommend that only qualified service technicians perform this service.

CHECKING THE FUEL FILTER

See Figure 70.

Check the fuel filter periodically. Replace it if contaminated or damaged.

REPLACING THE SPARK PLUG

See Figure 71.

This engine uses a Champion RCJ-4 with .025 in. electrode gap. Use an exact replacement and replace every 50 hours or more frequently, if necessary.

- Loosen the spark plug by turning it counterclockwise with a wrench.
- Remove the spark plug.
- Hand thread the new spark plug, turning it clockwise. Tighten securely with wrench.

  NOTE: Be careful not to cross-thread the spark plug. Cross-threading will seriously damage the cylinder.

Fig. 68

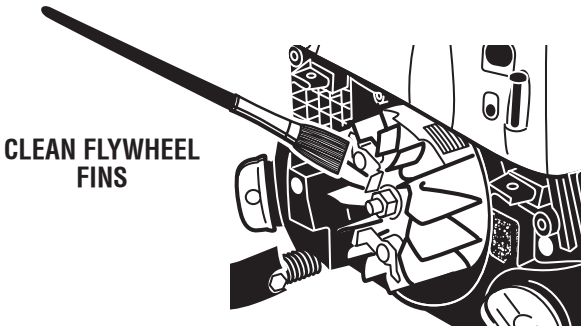


Fig. 69

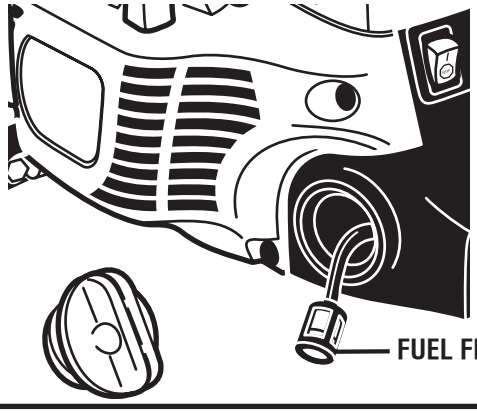


Fig. 70

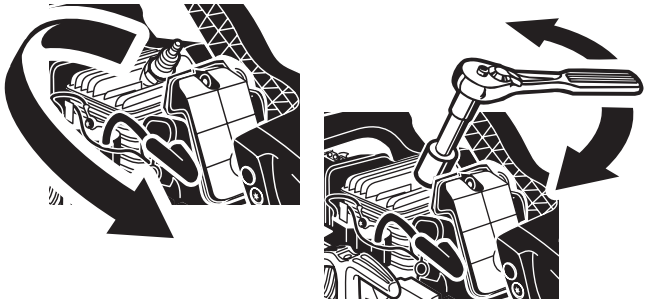


Fig. 71

INSPECTING/CLEANING THE SPARK ARRESTOR SCREEN

See Figure 72.

The muffler is equipped with a spark arrestor screen. A faulty spark arrestor screen can create a fire hazard. Through normal use the screen can become dirty and should be inspected weekly and cleaned as required. Always keep the muffler and spark arrestor on the saw in good condition.

⚠ WARNING

Muffler surfaces are very hot during and after operation of the chain saw. To avoid serious personal injury, keep all body parts away from the muffler.

- Allow the muffler to cool.
- Remove the cylinder cover to gain access to the deflector where the spark arrestor screen is located.
- Remove the deflector retaining nuts.
- Lift the deflector to access the spark arrestor screen.
- If dirty, clean the spark arrestor screen with a small wire brush. Replace the screen if it is cracked or otherwise deteriorated.

INSPECTING AND CLEANING CHAIN BRAKE

See Figures 73 - 74.

- Remove the clutch cover and clean the chain brake components. Check wear on the brake band and replace if worn or deformed. The band thickness should not be less than 0.024 in., or worn halfway through.
- Always keep the chain brake mechanism clean and lightly lubricate the linkage.
- Always test the chain brake performance after servicing or cleaning. Refer to **Operating Chain Brake** for additional information.
- Check the chain catcher and replace if damaged.

⚠ WARNING:

Even with daily cleaning of the mechanism, the dependability of a chain brake to perform under field conditions cannot be certified. Keep the SAFE-T-TIP nose guard on the saw's guide bar and use proper cutting techniques.

STORING THE PRODUCT

- Clean all foreign material from the product. Store it in a well-ventilated place that is inaccessible to children. Keep away from corrosive agents such as garden chemicals and de-icing salts.
- Abide by all Federal and local regulations for the safe storage and handling of gasoline.

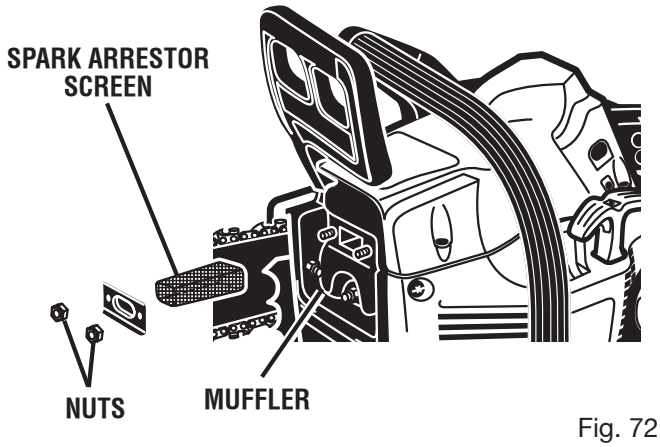


Fig. 72

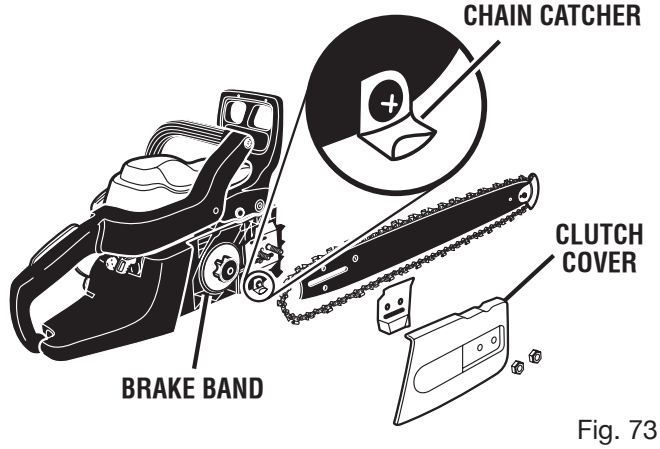


Fig. 73

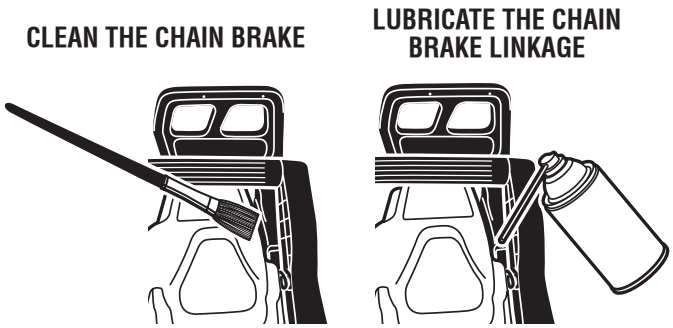


Fig. 74

When storing 1 month or longer:

- Drain all fuel from tank into a container approved for gasoline.
- Run the engine until it stops. This will remove all fuel-oil mix that could become stale and leave varnish and gum in the fuel system.
- Squeeze primer bulb several times to purge fuel from carburetor.
- Drain all bar and chain oil from tank into a container approved for oil.

BAR AND CHAIN COMBINATIONS

Model No.	Length of Bar	Guide Bar Part Number	Chain Part Number	Drive Links
UT10517	18 in.	310627001	671258001	62 link 3/8 in. low profile
UT10518	18 in.	310628001	901430001	72 link 0.325 in. standard
UT10520	20 in.	310629001	900920027	78 link 0.325 in. standard

TROUBLESHOOTING

Problem	Possible Cause	Solution
Engine will not start. [Make sure ignition switch is in the **RUN (I)** position.]	No spark.	Clean or replace spark plug. Reset spark plug gap. Refer to **Spark Plug Replacement** earlier in this manual.
	Engine is flooded.	With the ignition switch **OFF**, remove spark plug. Move choke lever to **RUN** position (pushed in completely) and pull starter cord 15 to 20 times. This will clear excess fuel from engine. Clean and reinstall spark plug. Set ignition switch to **RUN (I)** position. Push and fully release primer bulb 7 times. Pull starter three times with choke lever at **RUN**. If engine does not start, move choke lever to **HALF CHOKE** and repeat normal starting procedure. If engine still fails to start, repeat procedure with a new spark plug.
Engine starts but will not accelerate properly.	Carburetor requires **"L"** (Low Jet) adjustment.	Contact an authorized service center for carburetor adjustment.
Engine starts, then dies.	Carburetor requires **"L"** (Low Jet) adjustment.	Contact an authorized service center for carburetor adjustment.
Engine starts but will not run properly at high speed.	Carburetor requires **"H"** (High Jet) adjustment.	Contact an authorized service center for carburetor adjustment.
Engine does not reach full speed and/or emits excessive smoke.	Oil/fuel mixture incorrect.	Use fresh fuel and the correct 2-cycle oil mix ratio.
	Air filter is dirty.	Clean air filter. Refer to **Cleaning the Air Filter** in the *Maintenance* section of this manual.
	Spark arrestor screen is dirty.	Clean spark arrestor screen. Refer to **Inspecting/Cleaning the Spark Arrestor Screen** in the *Maintenance* section of this manual.
	Carburetor requires **"H"** (High Jet) adjustment.	Contact an authorized service center for carburetor adjustment.
Engine starts, runs, and accelerates but will not idle.	Carburetor requires adjustment to idle speed.	Turn idle speed screw **"T"** clockwise to increase idle speed. Refer to **Adjusting the Carburetor** in the *Maintenance* section of this manual.
Chain turns at idle.	Carburetor requires adjustment to idle speed.	Turn idle speed screw **"T"** counterclockwise to decrease speed. Refer to **Adjusting the Carburetor** in the *Maintenance* section of this manual.
	Air leak in the intake system.	Contact an authorized service center for a rebuild kit.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Bar and chain running hot and smoking.	Chain oil tank empty.	Oil tank should be filled every time fuel tank is filled.
	Chain tension is too tight.	Tension chain per instructions in **Adjusting the Chain Tension** in the *Maintenance* section of this manual.
	Oiler is not functioning.	Run at half throttle 30 to 45 seconds. Stop saw and check for oil dripping from SAFE-T-TIP and guide bar. If oil is present, the chain may be dull or bar may be damaged. If no oil is on the SAFE-T-TIP, contact an authorized service center.
Engine starts and runs, but chain is not rotating.	Chain brake is engaged.	Release chain brake. Refer to **Operating the Chain Brake** in the *Operation* section of this manual.
	Chain tension is too tight.	Tension chain per instructions in **Adjusting the Chain Tension** in the *Maintenance* section of this manual.
	Guide bar and chain assembled incorrectly.	Refer to **Replacing the Guide Bar and Chain** in the *Maintenance* section of this manual
	Guide bar and/or chain are damaged.	Inspect guide bar and chain for damage.
	Drive sprocket teeth damaged	Contact an authorized service center for drive sprocket replacement.

CALL US FIRST

For any questions about operating or maintaining your product, call the Homelite® Help Line!

Your product has been fully tested prior to shipment to ensure your complete satisfaction.

WARRANTY

LIMITED WARRANTY STATEMENT

Homelite Consumer Products, Inc., ("Homelite") warrants to the original retail purchaser that this HOMELITE brand outdoor product is free from defect in material and workmanship and agrees to repair or replace, at Homelite's, discretion, any defective product free of charge within these time periods from the date of purchase.

- Two years for all models if used for personal, family, or household use;
- 90 days for any unit used for other purposes, such as rental or commercial.

This warranty extends to the original retail purchaser only and commences on the date of the original retail purchase.

Any part of the this product manufactured or supplied by Homelite and found in the reasonable judgment of Homelite to be defective in material or workmanship will be repaired or replaced without charge for parts and labor by a Homelite authorized service center.

The product, including any defective part, must be returned to an authorized service dealer within the warranty period. The expense of delivering the product to the dealer for warranty work and the expense of returning it back to the owner after repair or replacement will be paid by the owner. Homelite's responsibility in respect to claims is limited to making the required repairs or replacements and no claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any HOMELITE brand product. Proof of purchase will be required by the dealer to substantiate any warranty claim. All warranty work must be performed by a Homelite authorized service center.

This warranty is limited to ninety (90) days from the date of original retail purchase for any HOMELITE brand product that is used for rental or commercial purposes, or any other income-producing purpose.

This warranty does not cover any HOMELITE brand product that has been subject to misuse, neglect, negligence, or accident, or that has been operated in any way contrary to the operating instructions as specified in this operator's manual. This warranty does not apply to any damage to the product that is the result of improper maintenance or to any product that has been altered or modified. The warranty does not extend to repairs made necessary by normal wear or by the use of parts or accessories which are either incompatible with the HOMELITE brand product or adversely affect its operation, performance, or durability. In addition, this warranty does not cover:

A. Tune-ups – Spark Plugs, Carburetor, Carburetor Adjustments, Ignition, Filters

B. Wear items – Bump Knobs, Outer Spools, Cutting Lines, Inner Reels, Starter Pulleys, Starter Ropes, Drive Belts, Tines, Felt Washers, Hitch Pins, Mulching Blades, Blower Fans, Blower and Vacuum Tubes, Vacuum Bags and Straps, Guide Bars, Saw Chains

Homelite reserves the right to change or improve the design of any HOMELITE brand product without assuming any obligation to modify any product previously manufactured.

ALL IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE STATED WARRANTY PERIOD. ACCORDINGLY, ANY SUCH IMPLIED WARRANTIES INCLUDING MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE, ARE DISCLAIMED IN THEIR ENTIRETY AFTER THE EXPIRATION OF THE APPROPRIATE TWO-YEAR, ONE-YEAR, OR NINETY-DAY WARRANTY PERIOD. HOMELITE'S OBLIGATION UNDER THIS WARRANTY IS STRICTLY AND EXCLUSIVELY LIMITED TO THE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS AND HOMELITE DOES NOT ASSUME OR AUTHORIZE ANYONE TO ASSUME FOR THEM ANY OTHER OBLIGATION. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. HOMELITE ASSUMES NO RESPONSIBILITY FOR INCIDENTAL, CONSEQUENTIAL, OR OTHER DAMAGES INCLUDING, BUT NOT LIMITED TO, EXPENSE OF RETURNING THE PRODUCT TO AN AUTHORIZED HOMELITE SERVICE CENTER AND EXPENSE OF DELIVERING IT BACK TO THE OWNER, MECHANIC'S TRAVEL TIME, TELEPHONE OR TELEGRAM CHARGES, RENTAL OF A LIKE PRODUCT DURING THE TIME WARRANTY SERVICE IS BEING PERFORMED, TRAVEL, LOSS OR DAMAGE TO PERSONAL PROPERTY, LOSS OF REVENUE, LOSS OF USE OF THE PRODUCT, LOSS OF TIME, OR INCONVENIENCE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

This warranty applies to all HOMELITE brand products manufactured by or for Homelite and sold in the United States and Canada.

To locate your nearest Homelite authorized service center, dial 1-800-242-4672 or log on to our website at www.homelite.com.

WARRANTY

THE FOLLOWING CALIFORNIA AIR RESOURCES BOARD (CARB) STATEMENT ONLY APPLIES TO MODEL NUMBERS REQUIRED TO MEET THE CARB REQUIREMENTS.

HOMELITE CONSUMER PRODUCTS, INC., LIMITED WARRANTY STATEMENT FOR FEDERAL AND CALIFORNIA EMISSION CONTROL SYSTEMS NON-ROAD AND SMALL OFF-ROAD ENGINES

YOUR WARRANTY RIGHTS AND OBLIGATIONS

The U.S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and Homelite Consumer Products, Inc., are pleased to explain the Emissions Control System Warranty on your 2008 model year non-road or small off-road engine. In California, new equipment that uses small off-road engines must be designed, built, and equipped to meet the state's stringent anti-smog standards. In other states, new 2000 and later model year non-road engines must be designed, built, and equipped at the time of sale to meet the U.S. EPA regulations for small non-road engines. The non-road engine must be free from defects in materials and workmanship which cause it to fail to conform with U.S. EPA standards for the first two years of engine use from the date of sale to the ultimate purchaser. Homelite Consumer Products, Inc., must warrant the emission control system on your non-road or small off-road engine for the period of time listed above provided there has been no abuse, neglect, or improper maintenance of your non-road or small off-road engine.

Your emission control system may include parts such as the carburetor or fuel injection system, the ignition system, catalytic converters, fuel tanks, valves, filters, clamps, connectors, and other associated components. Also included may be hoses, belts and connectors, and other emission-related assemblies.

Where a warrantable condition exists, Homelite Consumer Products, Inc., will repair your non-road or small off-road engine at no cost to you, including diagnosis, parts, and labor performed at an authorized service center for HOMELITE® brand outdoor products.

MANUFACTURER'S WARRANTY COVERAGE:

This product's emissions control system is warranted for two years. If any emission-related part on your engine is defective, the part will be repaired or replaced by Homelite Consumer Products, Inc., free of charge.

OWNER'S WARRANTY RESPONSIBILITIES

(a) As the non-road or small off-road engine owner, you are responsible for the performance of the required maintenance listed in your operator's manual. Homelite Consumer Products, Inc., recommends that you retain all receipts covering maintenance on your non-road or small off-road engine, but Homelite Consumer Products, Inc., cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance. Any replacement part or service that is equivalent in performance and durability may be used in non-warranty maintenance or repairs, and shall not reduce the warranty obligations of Homelite Consumer Products, Inc.

(b) As the non-road or small off-road engine owner, you should be aware, however, that Homelite Consumer Products, Inc., may deny you warranty coverage if your non-road or small off-road engine or a part has failed due to abuse, neglect, improper maintenance, or unapproved modifications.

(c) You are responsible for presenting your non-road or small off-road engine to an authorized service dealer as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

If you have any questions regarding your warranty rights and responsibilities, you should contact a Homelite Consumer Products, Inc., Customer Representative at 1-800-242-4672.

DEFECT WARRANTY COVERAGE REQUIREMENTS:

(a) The warranty period begins on the date the engine or equipment is delivered to an ultimate purchaser.

(b) General Emissions Warranty Coverage. Homelite Consumer Products, Inc., warrants to the ultimate purchaser and each subsequent purchaser that your non-road or small off-road engine is designed, built, and equipped at the time of sale to conform with all applicable regulations adopted by the California Air Resources Board or the United States Environmental Protection Agency; and that it is free from defects in materials and workmanship which cause the engine to fail to conform with applicable regulations for a period of two years from the date the non-road or small off-road engine is purchased by the initial purchaser.

(c) The warranty on emissions-related parts will be interpreted as follows: Any warranted part that is not scheduled for replacement as required in the Emissions Maintenance Schedule and Warranty Parts List set forth below is warranted for two years. If any such part (including any part that is scheduled only for regular inspection) fails during the period of warranty coverage, it will be repaired or replaced at any HOMELITE® Authorized Service Center at no charge. Any such part repaired or replaced under warranty will be warranted for the remaining warranty period. A statement to the effect of "repair or replace as necessary" would not reduce the period of warranty coverage. Any warranted part that is scheduled for replacement as required maintenance in the Emissions Maintenance Schedule and Warranty Parts List is warranted for the period of time prior to the first scheduled replacement point for that part. Any such part repaired or replaced under warranty is warranted for the remainder of the period prior to the first scheduled replacement point, and will be repaired or replaced at any HOMELITE® Authorized Service Center for no charge until that replacement point is reached.

Homelite Consumer Products, Inc., shall remedy warranty defects at any authorized HOMELITE® Authorized Service Center, including any distribution center that may be franchised to service the subject engines. Any diagnostic work done at a HOMELITE® Authorized Service Center shall be free of charge to the owner if such work determines that a warranted part is defective. Any manufacturer-approved or equivalent replacement part may be used for any warranty maintenance or repairs on emission-related parts, and must be provided free of charge to the owner if the part is still under warranty. Homelite Consumer Products, Inc., is liable for damages to other engine components caused by the failure of a warranted part still under warranty.

Add-on or modified parts that are not exempted by the California Air Resource Board may not be used. The use of any non-exempted add-on or modified parts will be grounds for disallowing a warranty claim. Homelite Consumer Products, Inc., will not be liable to warrant failures of warranted parts caused by the use of a non-exempted add-on or modified part.

The California Air Resources Board's Emission Warranty Parts List specifically defines the emission-related warranted parts. (EPA's regulations do not include a parts list, but the EPA considers emission-related warranted parts to include all the parts listed below.) Homelite Consumer Products, Inc., will provide any documents that describe its warranty procedures or policies within five days upon request by the California Air Resources Board.

EMISSIONS PARTS LIST

Emissions parts vary from product to product. Your emissions control system warranty applies to any of the following components that may be included on your product:

(1) Fuel Metering System
  - (i) Carburetor and internal parts (and/or pressure regulator or fuel injection system).
  - (ii) Air/fuel ratio feedback and control system.
  - (iii) Cold start enrichment system.
  - (iv) Fuel Tank.

(2) Air Induction System
  - (i) Controlled hot air intake system.
  - (ii) Intake manifold.
  - (iii) Air filter.

(3) Ignition System
  - (i) Spark Plugs.
  - (ii) Magneto or electronic ignition system.
  - (iii) Spark advance/retard system.

(4) Exhaust Gas Recirculation (EGR) System
  - (i) EGR valve body and carburetor spacer, if applicable.
  - (ii) EGR rate feedback and control system.

(5) Air Injection System
  - (i) Air pump or pulse valve.
  - (ii) Valves affecting distribution of flow.
  - (iii) Distribution manifold.

(6) Catalyst or Thermal Reactor System
  - (i) Catalytic converter.
  - (ii) Thermal reactor.
  - (iii) Exhaust manifold.

(7) Particulate Controls
  - (i) Traps, filters, precipitators, and any other device used to capture particulate emissions.

(8) Miscellaneous Items Used in Above Systems
  - (i) Electronic controls.
  - (ii) Vacuum, temperature, and time sensitive valves and switches.
  - (iii) Hoses, belts, connectors, and assemblies.

Homelite Consumer Products, Inc., will furnish with each new engine written instructions for its maintenance and use by the owner.

The Emissions Compliance Period referred to on the Emissions Compliance label indicates the number of operating hours for which the engine has been shown to meet Federal emission requirements. Category C=50 hours, B=125 hours, and A=300 hours.

WARRANTY

EMISSIONS MAINTENANCE SCHEDULE AND WARRANTED PARTS LIST

Emissions Parts	Inspect Before Each Use	Clean Every 5 Hours	Replace Every 25 Hours or Yearly	Clean Every 25 Hours or Yearly	Replace Every 50 Hours
AIR FILTER ASSY					
includes:					
Filter		X	X		
SPARK ARRESTOR				X	
CARBURETOR ASSY					
includes:					
Heat Dam					
Gaskets					
FUEL TANK ASSY					
includes:					
Fuel Lines	X				
Fuel Cap	X				
Fuel Filter					
IGNITION ASSY					
includes:					
Spark Plug					X

ALL EMISSIONS - RELATED PARTS ARE WARRANTED FOR TWO YEARS OR FOR THE PERIOD OF TIME PRIOR TO THE PARTS FIRST SCHEDULED REPLACEMENT WHICH EVER COMES FIRST.

Homelite®

OPERATOR'S MANUAL

UT10517/18 in. 42cc Chain Saw
UT10518/18 in. 46cc Chain Saw
UT10520/20 in. 46cc Chain Saw

⚠ WARNING:

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

CALIFORNIA PROPOSITION 65

SERVICE

For parts or service, contact your nearest Homelite authorized service dealer. Be sure to provide all relevant information when you call or visit. For the location of the authorized service dealer nearest you, please call 1-800-242-4672 or visit us online at www.homelite.com.

REPAIR PARTS

The model number of this product is found on a plate or label attached to the housing. Please record the serial number in the space provided below.

MODEL NUMBER _____

SERIAL NUMBER _____

HOMELITE CONSUMER PRODUCTS, INC.
1428 Pearman Dairy Road
Anderson, SC 29625
Phone 1-800-242-4672
www.homelite.com

987000-210
3-25-08 (REV:02)